BlomURBEX™

Autodesk Map 2007/2008/2009 Plug-in v3.0.0 User manual

Audience : **BLOM ASA partners and developers**

Abstract : User manual for **BlomURBEX™** Autodesk Map 2007/2008/2009 plug-in

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Revision History

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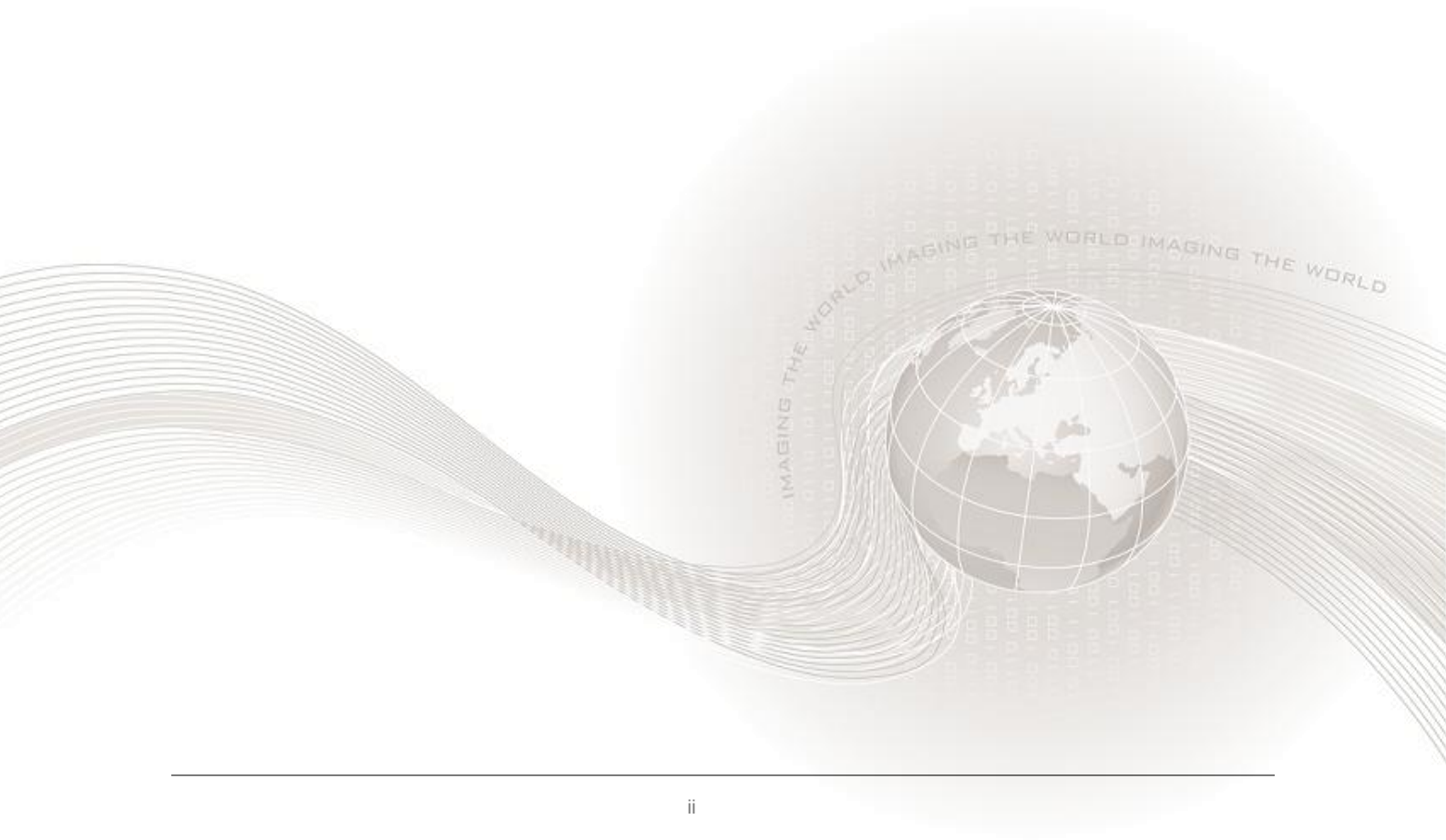
BUCM7P 1	December 2010	Document for release 2.5.2.



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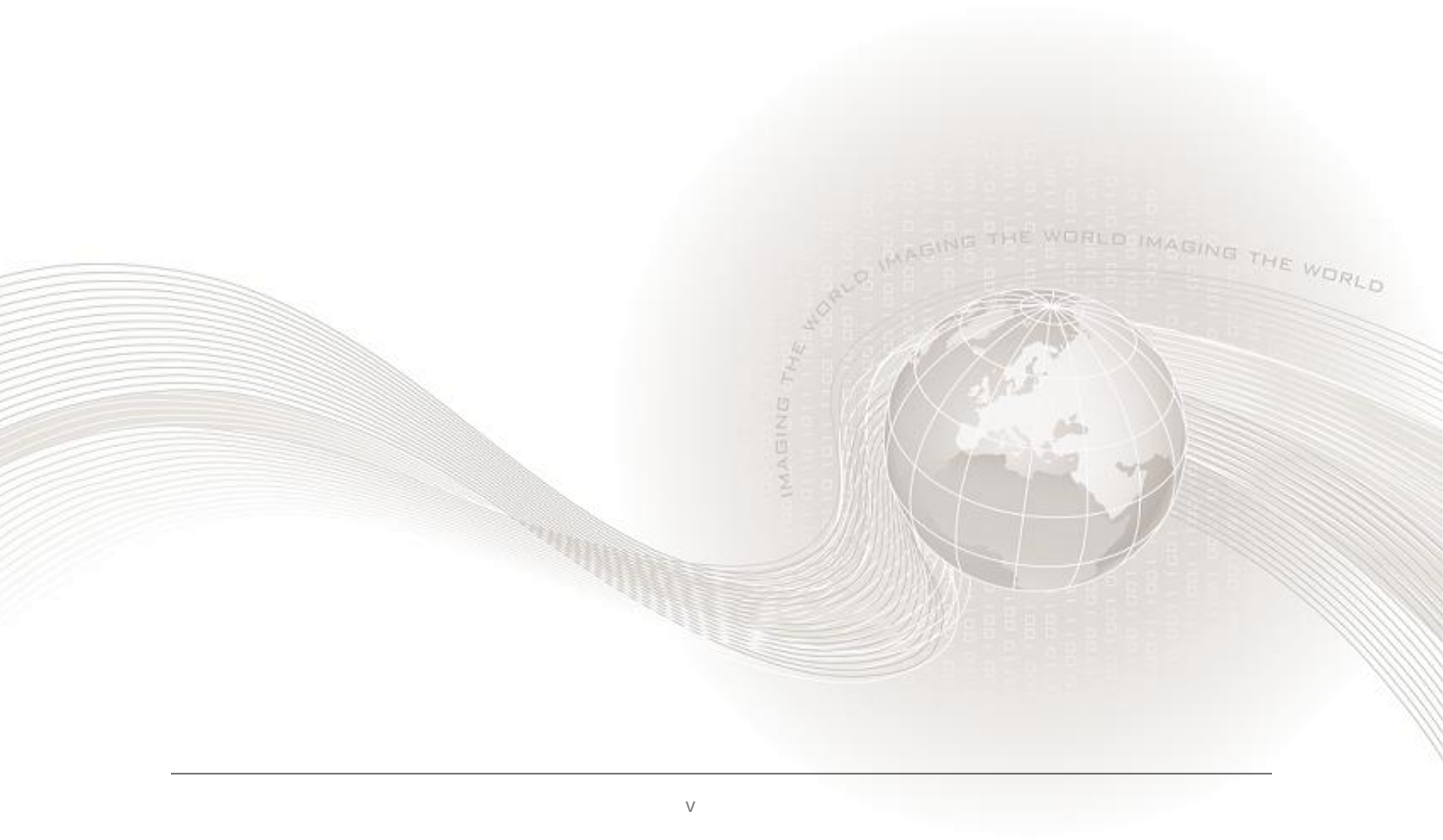

1 Introduction

BlomURBEX is a collection of Web Services provided by Blom that allow to navigate through high-detailed maps with ortho and oblique imagery, and to fly through 3D immersive cities. In addition, the Web Services can be invoked to obtain measurement information about buildings and other map elements.
Blom leverages in Europe and around the world the production of a huge image and 3D model database of more than 900 cities, and the database increases each month as new countries are included in it. BlomURBEX offers the most detailed and comprehensive imagery database and 3D models of urban places in the market.

Based on the same interface, Blom is developing a full range of plug-ins that integrates BlomURBEX services in common GIS and CAD applications. Blom development roadmap with BlomURBEX includes the following targets:

- BlomURBEX plug-in for ESRI ArcMap (ArcView, ArcEditor and ArcInfo)
- BlomURBEX plug-in for ESRI ArcIMS
- BlomURBEX plug-in for ESRI ArcGIS Server
- BlomURBEX plug-in for Intergraph GeoMedia Professional
- BlomURBEX plug-in for Integraph GeoMedia WebMap
- BlomURBEX plug-in for Autodesk Map and AutoCAD
- BlomURBEX plug-in for Autodesk MapGuide
- BlomURBEX plug-in for Bentley MicroStation
- BlomURBEX plug-in for MapInfo Professional
- BlomURBEX plug-in for MapInfo MapXtreme

Contact Blom at http://www.blomasa.com/contact.html for new releases and updates.

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2 Version changes

Version 3.0.0 of BlomURBEX Plug-in for Autodesk Map 2007/2008/2009 includes these improvements:

- Added support for adding Blom Library as a data source.
- "Display measurement tool results" option has been removed from "Printing" options in "Settings".
- Better navigational controls for map.
- Proxy settings will now get detected automatically.

Version 2.5.2 of BlomURBEX plug-in for Autodesk Map 2007/2008/2009 includes these improvements:

- Fixed an error that causes a crash in Autodesk Map when viewing obliques.
- OSGB36 projection supported.
- Fixed a problem for viewing overlays in one view of multi-view layouts.
- Fixed a problem refreshing overlays in obliques.
- NTLM and Kerberos proxy authentication support

Version 2.5.1 of BlomURBEX plug-in for Autodesk Map 2007/2008/2009 includes these improvements:

- Better support for big geometries in overlays

Version 2.5 of BlomURBEX plug-in for Autodesk Map 2007/2008/2009 includes these improvements:

- All the rendering is done asynchronously.
- Height measurement now uses a BlomURBEX service to obtain the best angle in the oblique image to force the measurement in a vertical direction.
- Better resize to avoid flickering.
- Vector overlay on top of oblique imagery is done faster.
- A new option in settings can change the priority order for the basemap. Now it is possible to priorize between the different ortho images ("pictometry", "Countryortho" or "satellite") present sometimes at the same zoom level in the server.
- Other tile layers in BlomURBEX server can be overlapped selecting them in the options dialog.
- Product and version number appears in About dialog.
- Print error that occurred after printing is fixed.
- Tooltips close when the map looses focus.
- Default zoom and orientation has been fixed.
- Views are now correct when changing between different layouts.
- Bug fixed with double sync between map and BlomURBEX viewer.
- Bug fixed with Extract image tool.
- Proj4 DLL is no more used, but DotSpatial is used instead.
- Installer uses bootstrap to download from web required prerequisites.
- More accurate measurements in distance and area.

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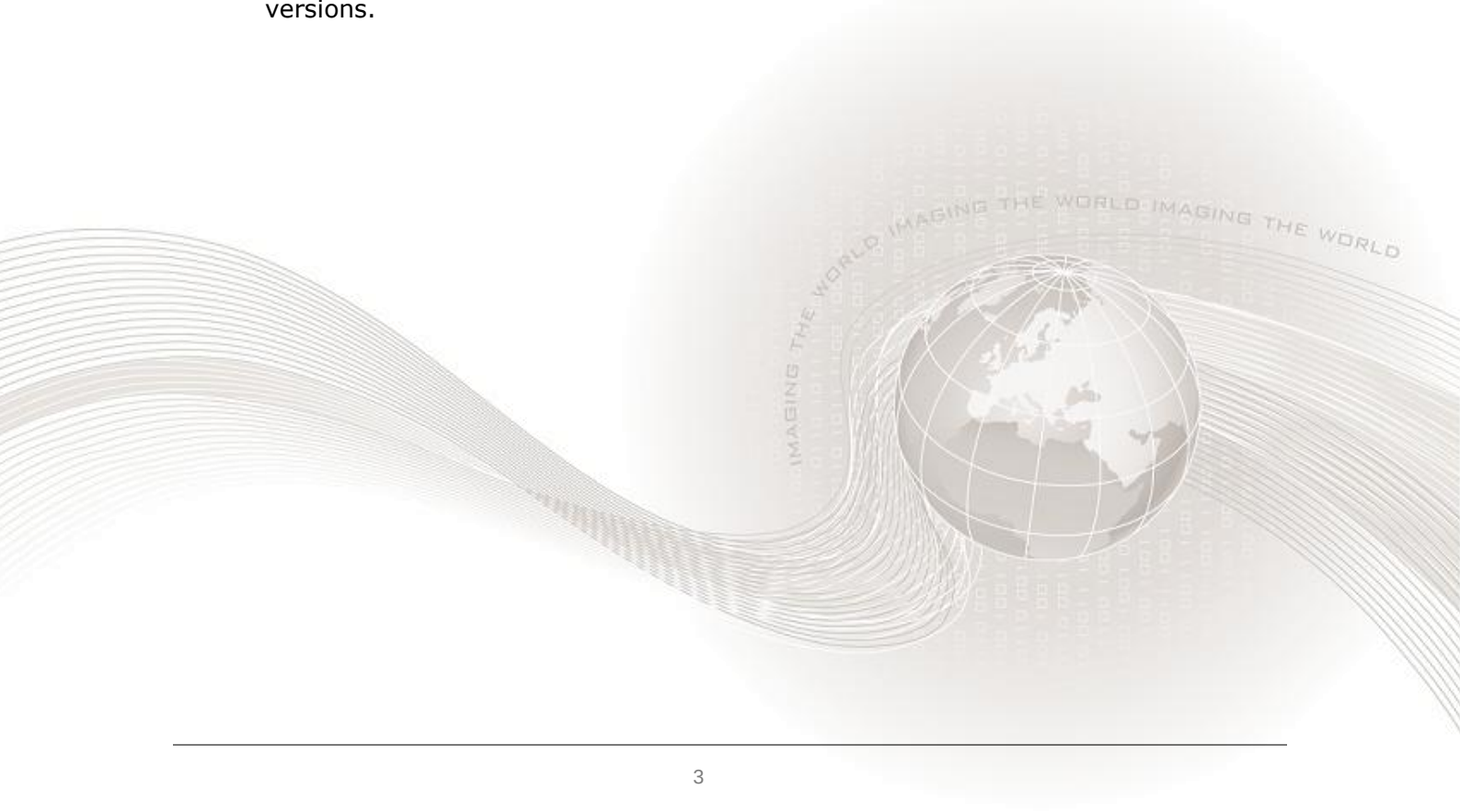
Version 2.0 of BlomURBEX plug-in for Autodesk Map 2007/2008/2009 includes these improvements:

- Internet Explorer 7 not needed. New BlomURBEX viewer do not requires Internet Explorer 7 to be installed or any other web browser. The plug-in manage requests on its own.
- A new image cache owned by all the plug-ins speeds bitmap recovery and makes it easy to manage the plug-ins cache. No more the browser cache is used.
- Easier installation. BlomURBEX viewer component is not a previous install requirement. Plug-in installer checks if viewer is installed, and if not, then installs it. The viewer is never uninstalled to avoid other plug-ins to stop working.
- Better performance. New BlomURBEX viewer is not JavaScript based but .NET based, and executes code faster.
- New option to choose the date of the imagery, allowing to see history changes in images, and seeing different years in a side-by-side mode.
- Year of the current visible image in a label at the bottom of each view.
- Intelligent behaviour when zooming. If a better view mode or orientation exists for current zoom then it is loaded automatically.
- Faster vector overlay on obliques. The new BlomURBEX viewer sends fewer requests to transform vector data between ortho and oblique, and draws vector data faster.
- A new button in toolbar to enable/disable vector overlay faster than changing settings.
- Print improvement. Print and export now support vector overlay.
- Log levels to better grained logging and a default folder for storing logs in just one file.
- A new tool for extracting images has been added. If image exported is ortho view, then the world file is saved for easy use in GIS packages.
- Proxy settings support
- Full support of Windows versions from XP to 7, including 32 and 64 bits versions.



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3 System requirements

Microsoft .NET Framework 2.0 and 3.5 (installed by setup if not present)

BlomURBEX plug-in for Autodesk Map 2007/2008/2009 is developed with Microsoft .NET Framework 2.0 and 3.5. During installation, if these Frameworks are not present, they are downloaded and installed.

Autodesk Map version 2007/2008/2009

This BlomURBEX plug-in for Autodesk Map 2007/2008/2009 requires any of these products from Autodesk installed in order to execute BlomURBEX plug-in.

Windows versions

BlomURBEX plug-in for Autodesk Map 2007/2008/2009 supports Windows versions supported by the Autodesk product. Read Autodesk Map 2007/2008/2009 install guide for more info.

User Token

To access BlomURBEX Web Services a UserToken is needed. This UserToken is an encrypted string that authenticates each user request. Contact with Blom Marketing Department to obtain the required UserToken in:

http://www.blomasa.com/contact.html

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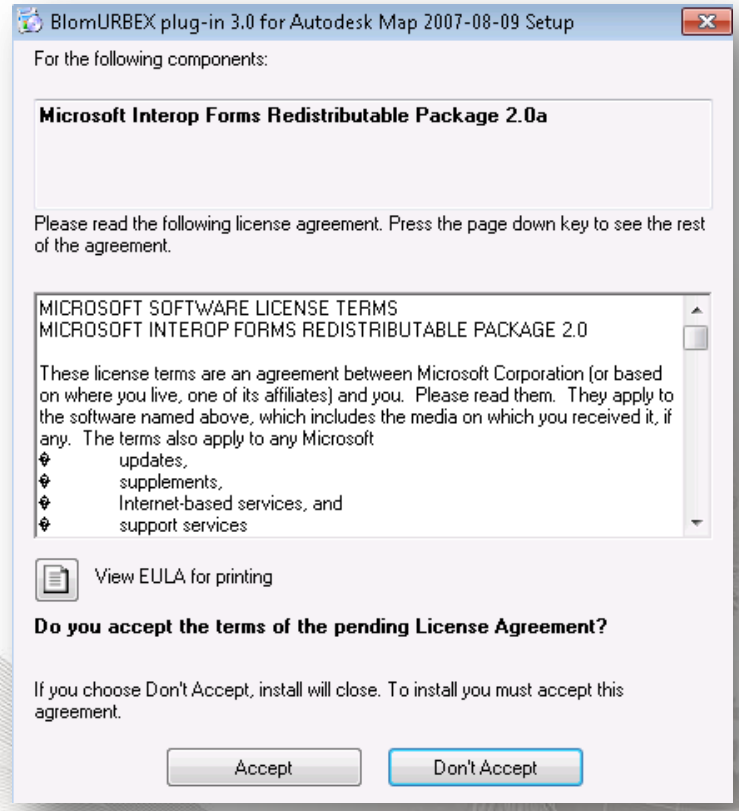
4 Installing BlomURBEX plug-in for Autodesk Map 2007/2008/2009

1. Ensure you are logged onto your computer with Administrator privileges.
2. Close all programs.
3. Uninstall previous "BlomURBEX plug-in" versions for any GIS or CAD package that could be installed. Older "BlomURBEX plug-ins" cannot coexist with current version. If any other plug-in is installed for other GIS or CAD package, upgrade the plug-in also to last version.
4. Run setup.exe installer. Be careful to not run Urbex30AutodeskMap2007.msi installer because this installer does not check if dependencies are already installed.
5. If .NET Framework 2.0 or .NET Framework 3.5 are not installed a message is shown. Accept in the message. The Frameworks will be downloaded from the Microsoft webpage and installed.
6. If Microsoft Interop Forms is not installed a dialog will appear to perform its installation. Click in Accept to accept the license agreement and continue. This software from Microsoft is an add-in to the .NET Framework that improves ActiveX / .NET interoperability.


BlomURBEX plug-in 3.0 for Autodesk Map 2007-08-09 Setup
For the following components:
Microsoft Interop Forms Redistributable Package 2.0a
Please read the following license agreement. Press the page down key to see the rest of the agreement.
MICROSOFT SOFTWARE LICENSE TERMS
MICROSOFT INTEROP FORMS REDISTRIBUTABLE PACKAGE 2.0
These license terms are an agreement between Microsoft Corporation (or based on where you live, one of its affiliates) and you. Please read them. They apply to the software named above, which includes the media on which you received it, if any. The terms also apply to any Microsoft
updates,
supplements,
Internet-based services, and
support services
View EULA for printing
Do you accept the terms of the pending License Agreement?
If you choose Don't Accept, install will close. To install you must accept this agreement.
Accept
Don't Accept

7. Wait until Microsoft Interop Forms install completes.

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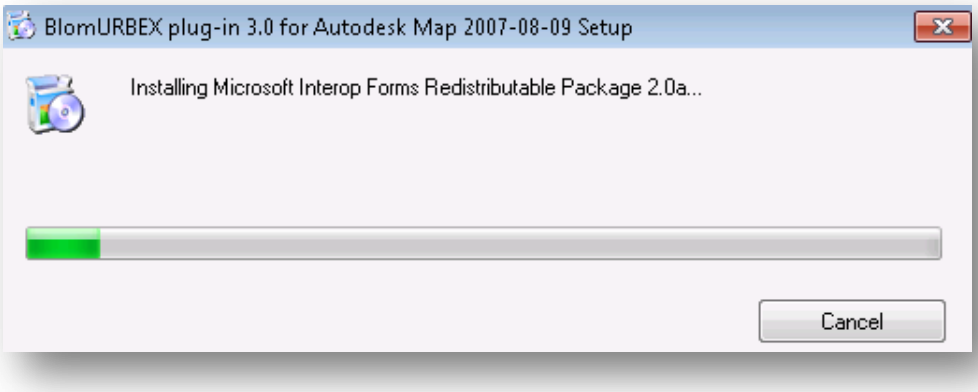
BlomURBEX plug-in 3.0 for Autodesk Map 2007-08-09 Setup
Installing Microsoft Interop Forms Redistributable Package 2.0a...
Cancel

8. The BlomURBEX plug-in for Autodesk Map 2007/2008/2009 Setup Wizard will lead you through all stages of the setup process.

BlomURBEX plug-in 3.0 for Autodesk Map 2007-08-09
Welcome to the BlomURBEX plug-in 3.0 for Autodesk Map 2007-08-09 Setup Wizard
BLOM
The installer will guide you through the steps required to install BlomURBEX plug-in 3.0 for Autodesk Map 2007-08-09 on your computer.
WARNING: This computer program is protected by copyright law and international treaties. Unauthorized duplication or distribution of this program, or any portion of it, may result in severe civil or criminal penalties, and will be prosecuted to the maximum extent possible under the law.
Cancel
< Back
Next >

9. Click Next > to begin installation.

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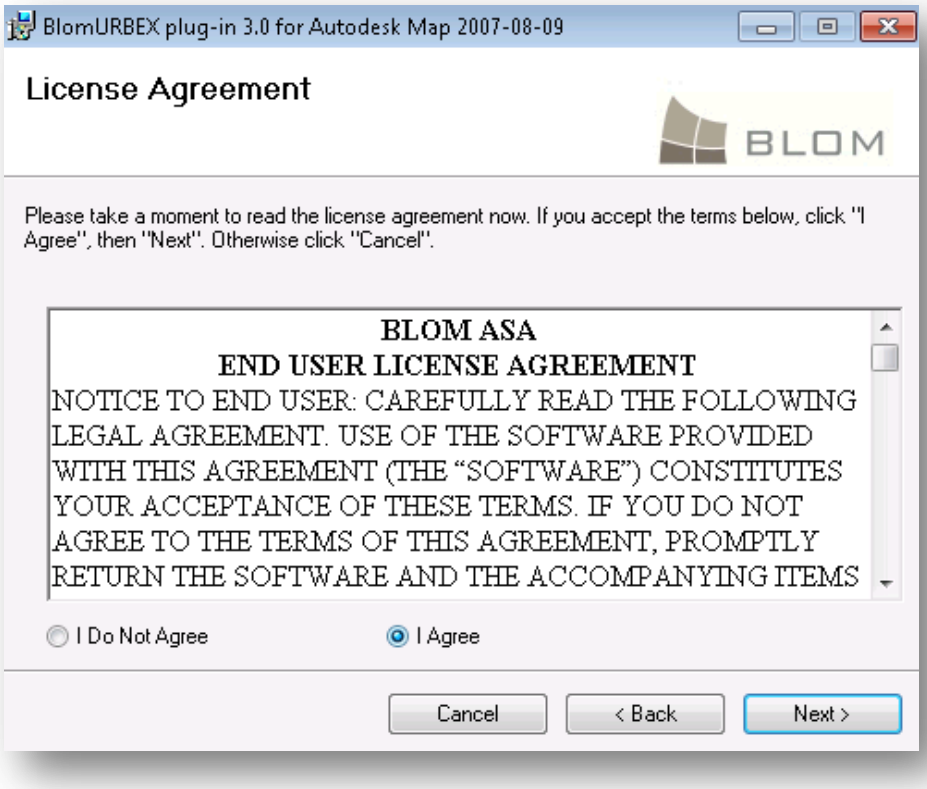
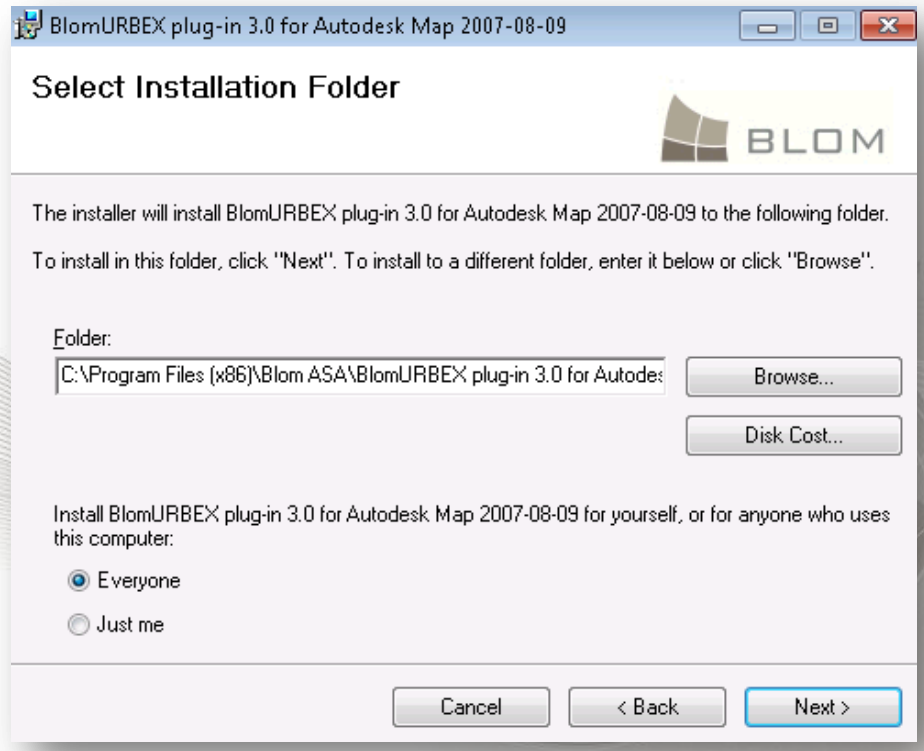

BlomURBEX plug-in 3.0 for Autodesk Map 2007-08-09
License Agreement
BLOM
Please take a moment to read the license agreement now. If you accept the terms below, click "I Agree", then "Next". Otherwise click "Cancel".
BLOM ASA
END USER LICENSE AGREEMENT
NOTICE TO END USER: CAREFULLY READ THE FOLLOWING LEGAL AGREEMENT. USE OF THE SOFTWARE PROVIDED WITH THIS AGREEMENT (THE "SOFTWARE") CONSTITUTES YOUR ACCEPTANCE OF THESE TERMS. IF YOU DO NOT AGREE TO THE TERMS OF THIS AGREEMENT, PROMPTLY RETURN THE SOFTWARE AND THE ACCOMPANYING ITEMS
I Do Not Agree
I Agree
Cancel
< Back
Next >

10. The next screen displays the license agreement. Please read this and if you accept the terms select the "I Agree" radio button. Click Next > to continue.


BlomURBEX plug-in 3.0 for Autodesk Map 2007-08-09
Select Installation Folder
BLOM
The installer will install BlomURBEX plug-in 3.0 for Autodesk Map 2007-08-09 to the following folder.
To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".
Folder:
C:\Program Files (x86)\Blom ASA\BlomURBEX plug-in 3.0 for Autodes
Browse...
Disk Cost...
Install BlomURBEX plug-in 3.0 for Autodesk Map 2007-08-09 for yourself, or for anyone who uses this computer:
Everyone
Just me
Cancel
< Back
Next >

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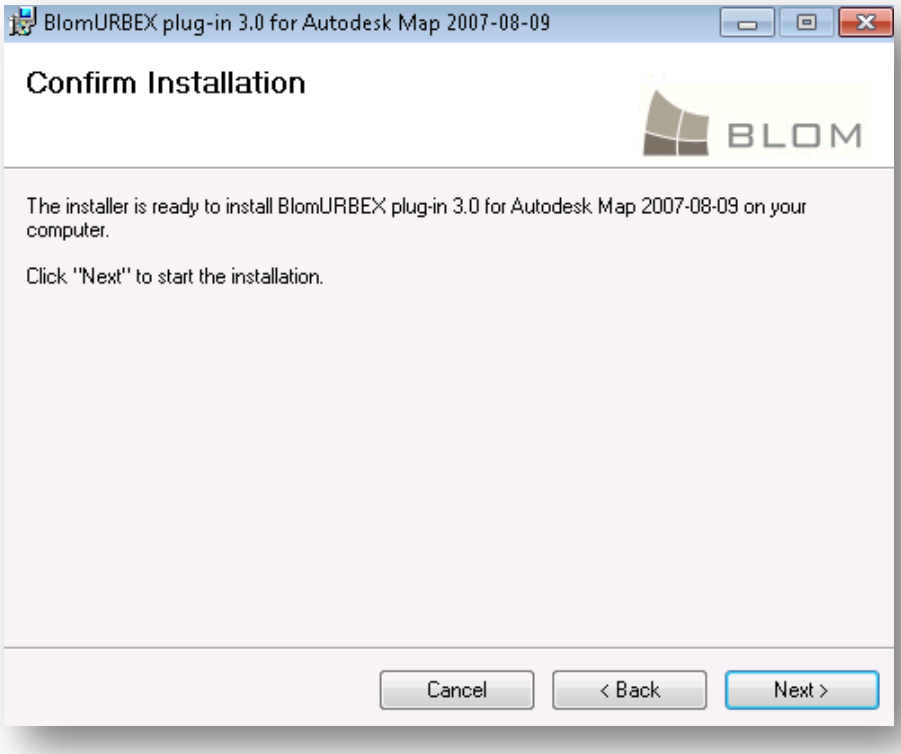
11. Click Browse to change the destination folder. Click "Disc cost" to confirm that there is enough space to install. Select in the radio buttons if BlomURBEX plug-in for Autodesk Map 2007/2008/2009 will be available to all users or just you in your computer. Click Next > to continue.


BlomURBEX plug-in 3.0 for Autodesk Map 2007-08-09
Confirm Installation
BLOM
The installer is ready to install BlomURBEX plug-in 3.0 for Autodesk Map 2007-08-09 on your computer.
Click "Next" to start the installation.
Cancel
< Back
Next >

12. Click Next > to start installation.
13. Finally click Finish to close installation wizard.

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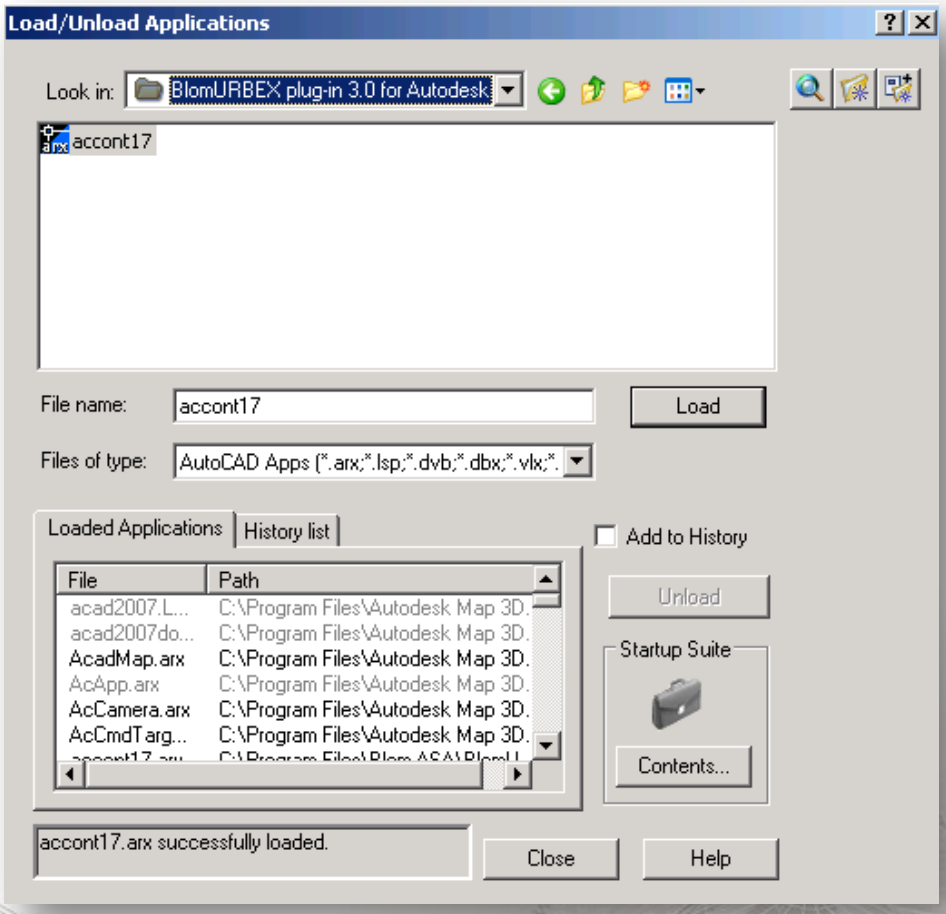
5 Starting with BlomURBEX plug-in for Autodesk Map 2007/2008/2009

5.1 Setup the BlomURBEX Viewer plug-in in Autodesk Map 2007/2008/2009

To execute the plug-in, follow these steps:

1. Open Autodesk Map 2007/2008/2009.
2. Select the Tools > Load application menu. The "Load / Unload applications" dialog box will open.



3. Browse for the accont17.arx file contained in the plug-in install folder, select it, and then click the Load button. This ARX application is an utility that allows dockable windows inside Autodesk Map 2007/2008/2009. It should appear in the bottom list of loaded applications, as shown in the screenshot.
4. To avoid this setup every time Autodesk Map is started, click in the Contents button. The "Load on startup" dialog box will appear.

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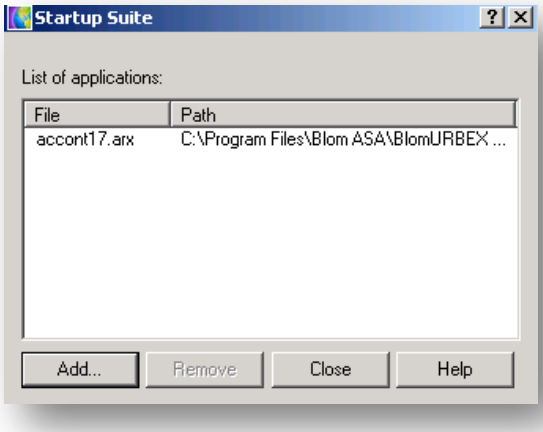
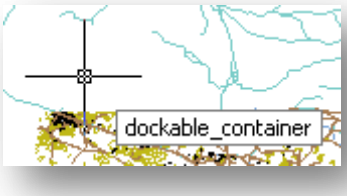
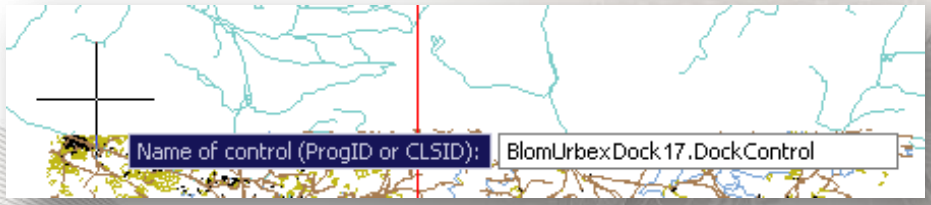


5. Click the Add button. A new dialog will open. Browse to the accont17.arx file in the plug-in install folder, select it, and click Add. Then Close the "Load on startup" dialog and the "Load / Unload applications" dialog.
6. To load the Blom Dockable Window that contains the BlomURBEX Viewer, type with the mouse cursor inside Autodesk Map or type in the command bar if visible the following command: dockable_container and press Enter.



7. The command executes and asks for a ProgID (the identifier of the dockable control that shows BlomURBEX Viewer). Type the following identifier: BlomUrbexDock17.DockControl, and press Enter. After some seconds, the BlomURBEX Viewer will be opened in a dockable window inside Autodesk Map 2007/2008/2009.



8. It is possible to dock or undock the window as with any Autodesk Map dockable window. Also it is possible to reduce the window to a sidebar clicking in the buttons that appear on top and title bar of the window. Also the window can be closed. To open it again repeat steps 6 and 7. The window saves its state when Autodesk Map is closed so next time it will be seen the same as previously.

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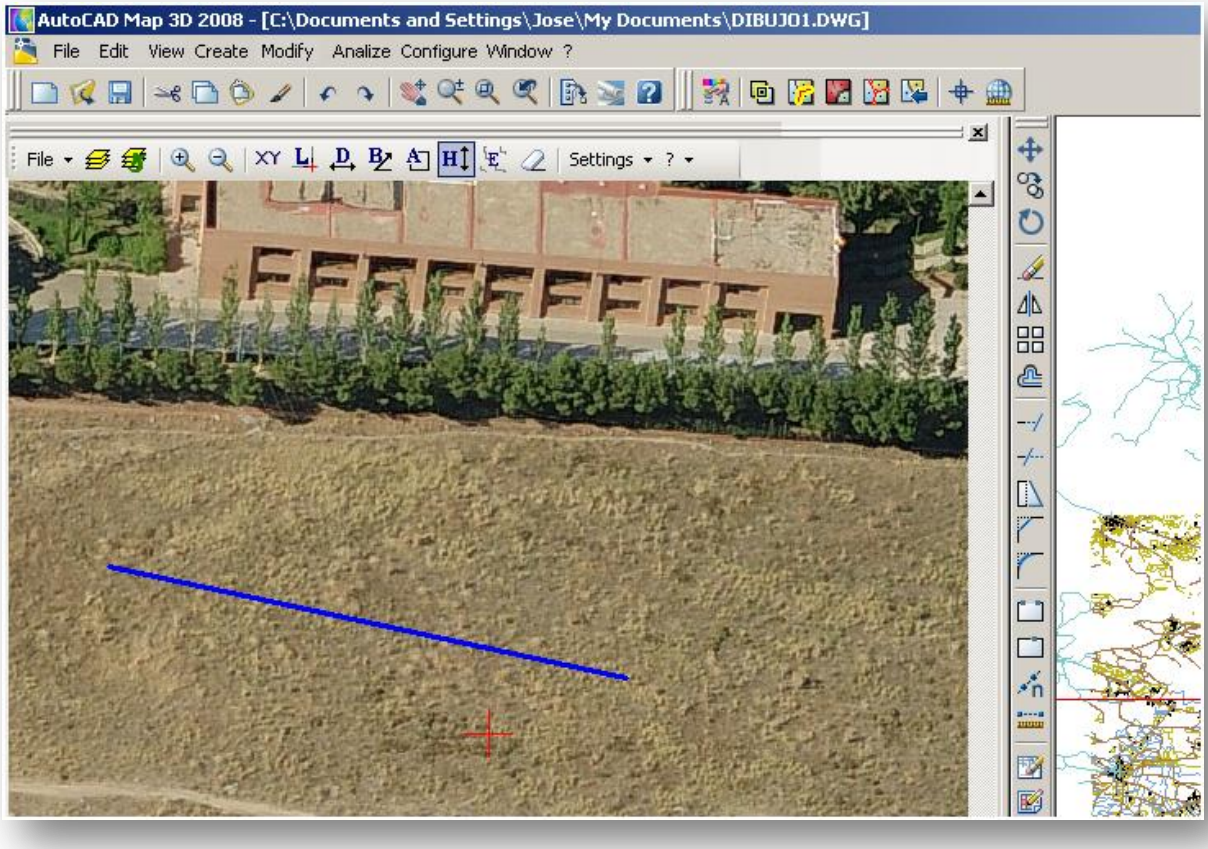

AutoCAD Map 3D 2008 - [C:\Documents and Settings\Jose\My Documents\DIBUJO1.DWG]
File Edit View Create Modify Analize Configure Window ?
File
Settings

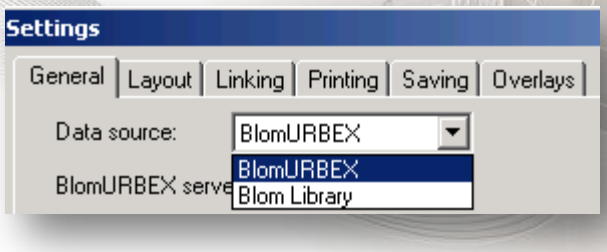
5.2 Adding Data Sources

A Data Source is a repository of complex cartographic data. In order to work with a Data Source it must be assigned to Plug-in.
Current version of Plug-in supports two different Data Sources:

1. BlomURBEX™ online services
2. Blom Libraries

5.2.1 Adding BlomURBEX™ as a Data Source

1. In the BlomURBEX Viewer toolbar, select the menu Settings > Open settings dialog, to open the Settings dialog.
2. In the dialog select General tab.
3. In the Data Source drop down select "BlomUrbex".



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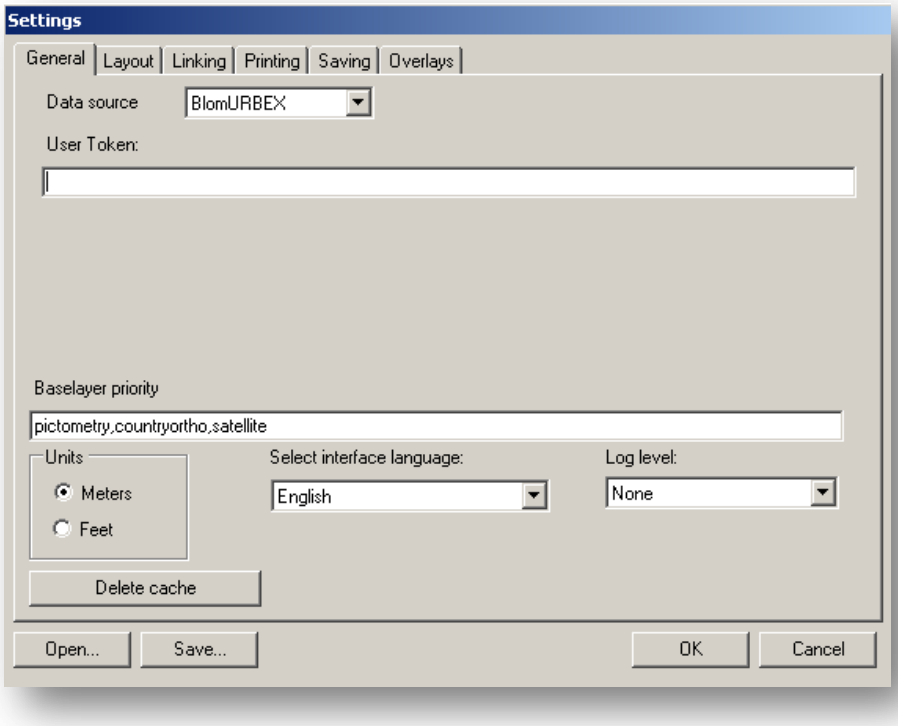
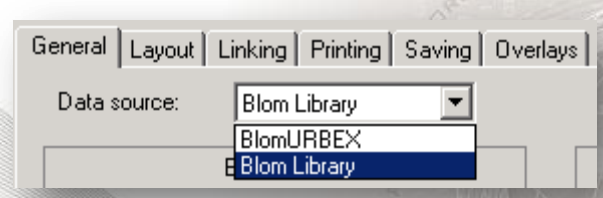
4. In the "User token" textbox type the UserToken provided by Blom. This UserToken is an encrypted string that authenticates each user request. Contact with Blom Marketing Department to obtain the required UserToken. The UserToken is needed to connect to the BlomURBEX Web Services and allow the access to the imagery.



5. Click OK button to finish configuration.

5.2.2 Adding Blom Library as a Data Source

1. In the BlomURBEX Viewer toolbar, select the menu Settings > Open settings dialog, to open the Settings dialog.
2. In the dialog select General tab.
3. In the Data Source drop down select "Blom Library".



4. Selecting Blom Libraries
   - Browse and select a Blom Library.
   - Click "add new" button in order to add multiple libraries.
5. Selecting Library Licenses
   - Browse and select a valid License.
   - Click "Add New" button in order to add multiple licenses in case there are more than one library.

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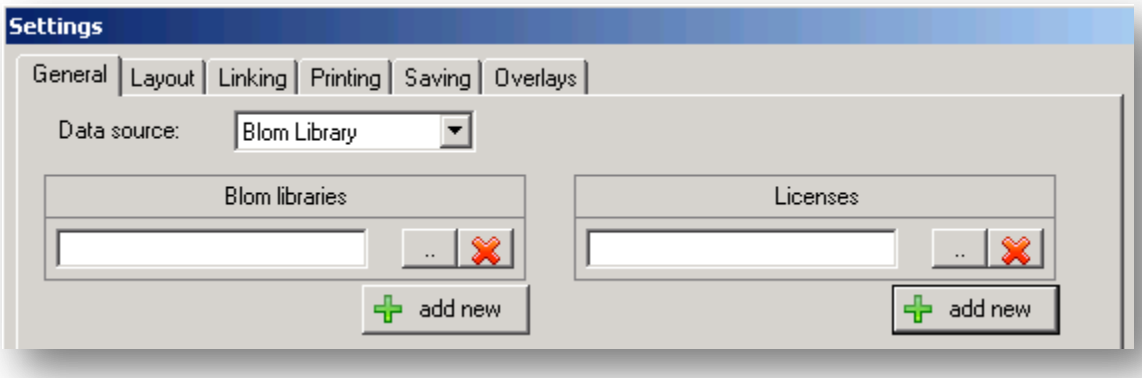
6. In order to remove a Library or a License, click delete button next to it.

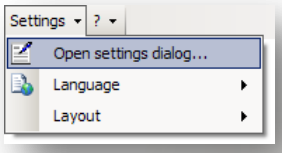


7. Click OK button to finish configuration.

5.3 Setup the BlomURBEX Viewer basic options

The first thing to do in an application that uses BlomURBEX Viewer is to specify some minimum options in order that the viewer can correctly search for images. For this follow the next steps.

1. Open BlomURBEX Viewer window using the dockable_container command as explained above.
2. In the BlomURBEX Viewer toolbar select the menu Settings > Open settings dialog to open the Settings dialog.



3. In the dialog select the General tab. Select the desired Data Source (See section 5.2 for details on adding a Data Source).
4. Select the Linking tab. Depending on the projection of the basemap (the map of Autodesk Map 2007/2008/2009) it is needed to indicate BlomURBEX Viewer which projection is this. Follow next steps.

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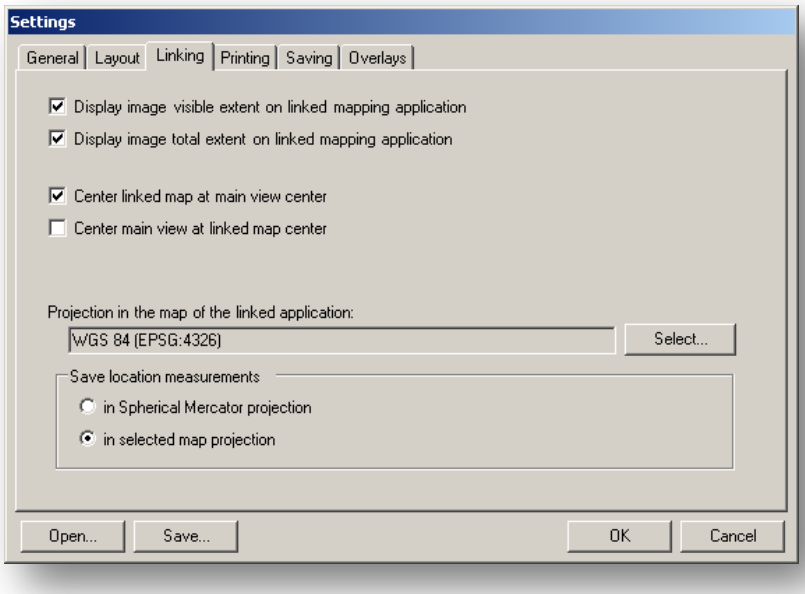
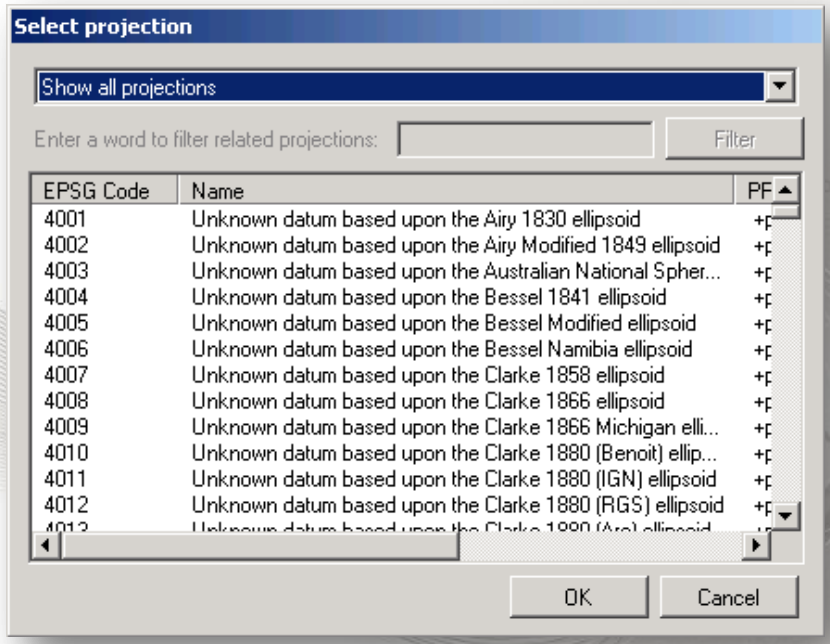


5. Click in the Select button to open the "Select projection" dialog. In the dialog select in the available projection list the one that the basemap has. There are different options to select the desired projection:

6. To select a projection from the full list of supported projections, choose "Show all projections" in the upper dropdown box. To select click in the list and then click in OK, or double click an item in the list. Any item chosen will be reminded later in a list with the most used projections, so it is not needed to find it again in the long list. Also, it is possible to add any item to this "most used" list without leaving the dialog clicking with right mouse button and selecting "Add to most used" from the context menu.


Select projection
Show all projections
Enter a word to filter related projections:
Filter
EPSG Code
Name
PF
4001 Unknown datum based upon the Airy 1830 ellipsoid
4002 Unknown datum based upon the Airy Modified 1849 ellipsoid
4003 Unknown datum based upon the Australian National Spher...
4004 Unknown datum based upon the Bessel 1841 ellipsoid
4005 Unknown datum based upon the Bessel Modified ellipsoid
4006 Unknown datum based upon the Bessel Namibia ellipsoid
4007 Unknown datum based upon the Clarke 1858 ellipsoid
4008 Unknown datum based upon the Clarke 1866 ellipsoid
4009 Unknown datum based upon the Clarke 1866 Michigan elli...
4010 Unknown datum based upon the Clarke 1880 (Benoit) ellip...
4011 Unknown datum based upon the Clarke 1880 (IGN) ellipsoid
4012 Unknown datum based upon the Clarke 1880 (RGS) ellipsoid
OK
Cancel

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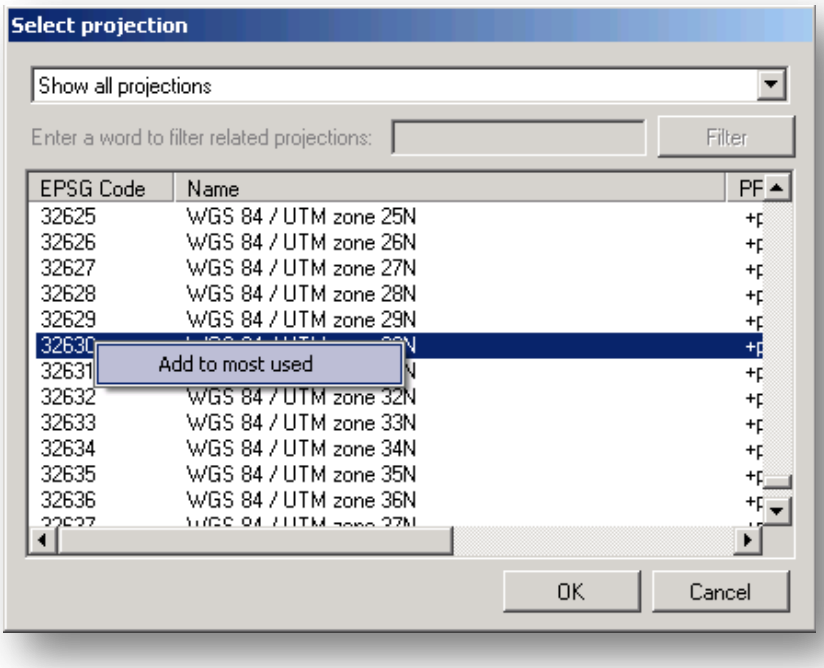
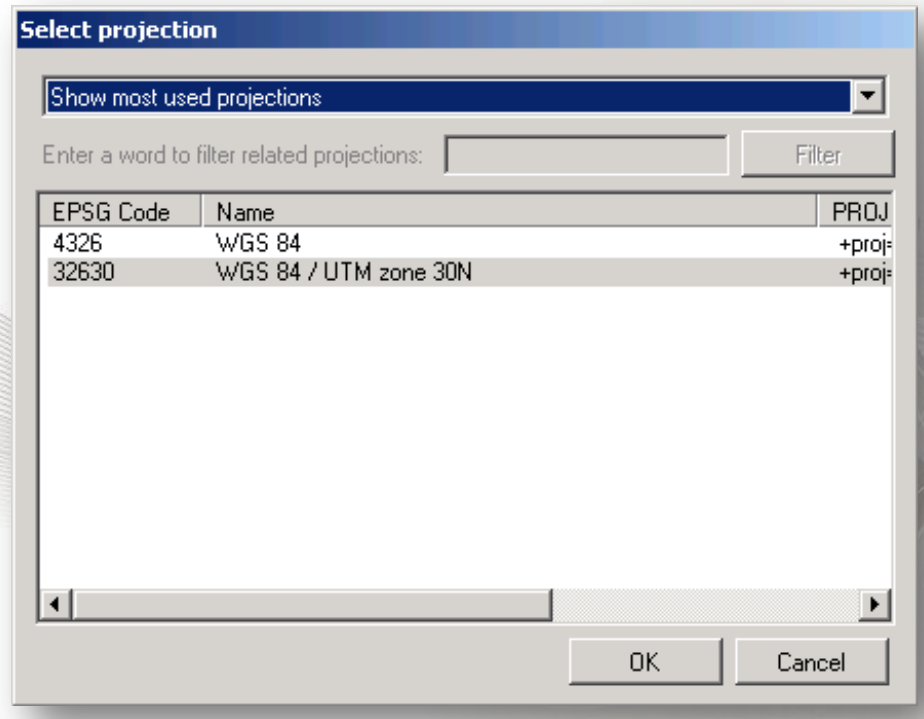

Select projection
Show all projections
Enter a word to filter related projections:
Filter
EPSG Code
Name
PF
32625 WGS 84 / UTM zone 25N
32626 WGS 84 / UTM zone 26N
32627 WGS 84 / UTM zone 27N
32628 WGS 84 / UTM zone 28N
32629 WGS 84 / UTM zone 29N
Add to most used
32632 WGS 84 / UTM zone 32N
32633 WGS 84 / UTM zone 33N
32634 WGS 84 / UTM zone 34N
32635 WGS 84 / UTM zone 35N
32636 WGS 84 / UTM zone 36N
OK
Cancel

7. To select a projection from the reduced list of the most used projections, choose "Show most used projections" from the upper dropdown box. The list will show only those projections selected at least once or any other marked explicitly as "most used". To select click in the list and then click in OK, or double click an item in the list. Alternatively, it is possible to remove items from this "most used" list clicking with the right mouse button and selecting "Remove from most used". The current selected projection cannot be removed from this list.



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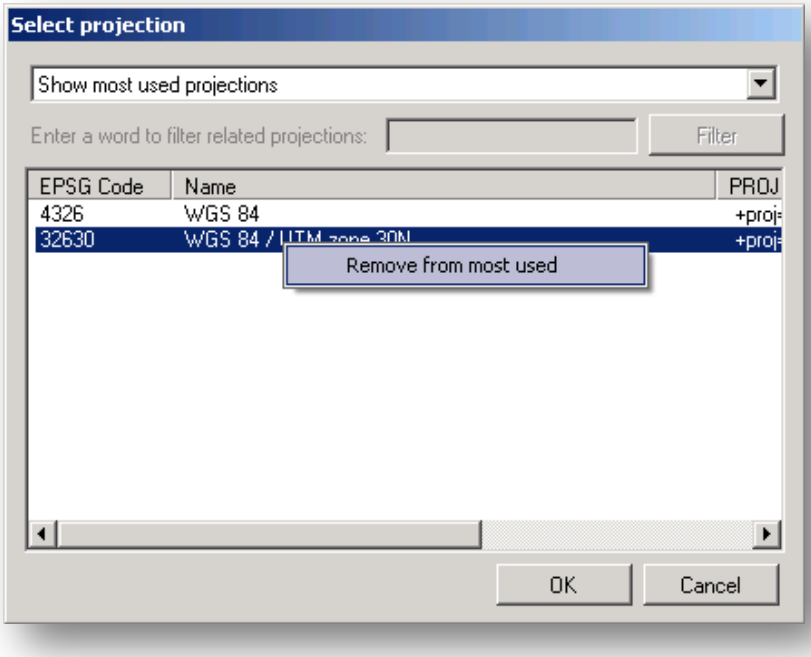
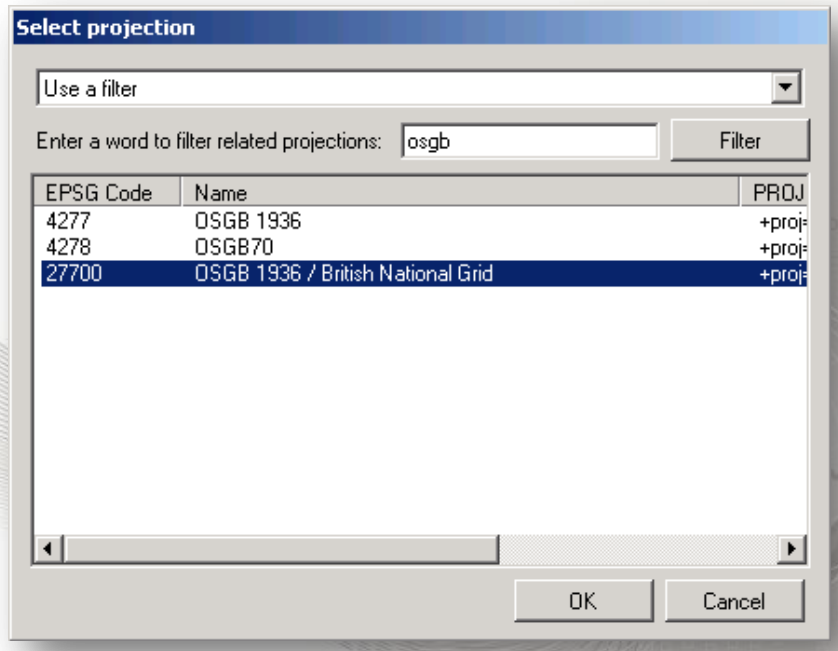


8. To select a projection from a reduced list using a filter, choose "Use a filter" in the upper dropdown box. The filter textbox and Filter button will activate. Type a search word or words in the filter textbox and press Filter. Only the projections containing the full search text will be shown. The search is possible by EPSG code and also by the projection name, and is case insensitive. To select click in the list and then click in OK, or double click an item in the list. The selected projection will be recorded in the "most used" list as usual.



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9. Save the settings clicking in OK. Settings are saved in registry for each user so it is not needed to set them again later as each user has their own settings. The latest settings are used by default. To configure different settings use the Save button to save a file with the settings that can be later opened with the Open button.
10. This finish the configuration.

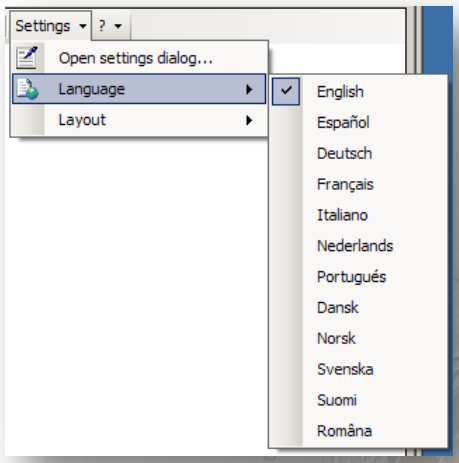
Settings do not persist, if the Plug-in is reinstalled. We need to set the settings again in case of re-installation.

5.4 Changing language interface

Language interface can be changed through the direct menu: Settings > Language, or through the Settings dialog, by Settings > Open Settings dialog. The first is a more direct way to change the language, but the results are the same.

To change the language through the direct menu:

1. Click in menu Settings > Language > <The desired language>. The interface language of the application is changed at once. The selection is saved in the user registry so next time BlomURBEX Viewer is opened the preferred language will remain in the interface.



To change the language through the settings dialog:

1. Click in menu Settings > Open settings dialog.
2. Select the General tab. In the Language selector, choose the preferred one. The interface language of the application is changed at once.
3. If needed, click Save to save the settings in a file for future use.
4. Click OK to save the settings in user registry. Next time BlomURBEX Viewer is opened the preferred language will remain in the interface.

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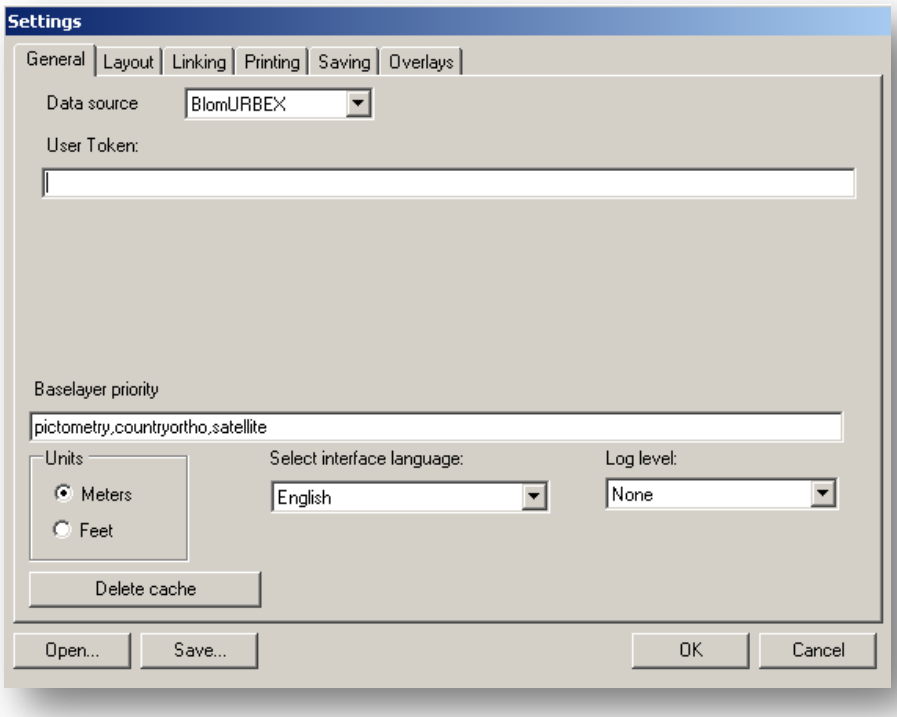
Improving translations of the interface is very easy. Check the Appendixes.

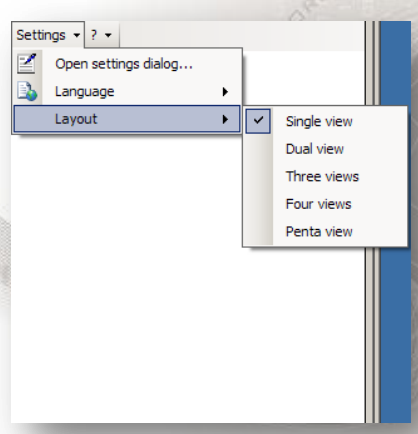


5.5 Changing layout

BlomURBEX Viewer can show one or several orientations at the time using different layouts, and view images of different dates. It is possible to change from one layout to other either from Settings > Layout direct menu, or using the Settings dialog by Settings > Open settings dialog menu. The first is a more direct way to change the layout, but the results are the same.

To change the layout using a direct menu:

1. Click in Settings > Layout > <the desired layout>. The choice is saved in the user registry so this layout will remain in future sessions until changed again.



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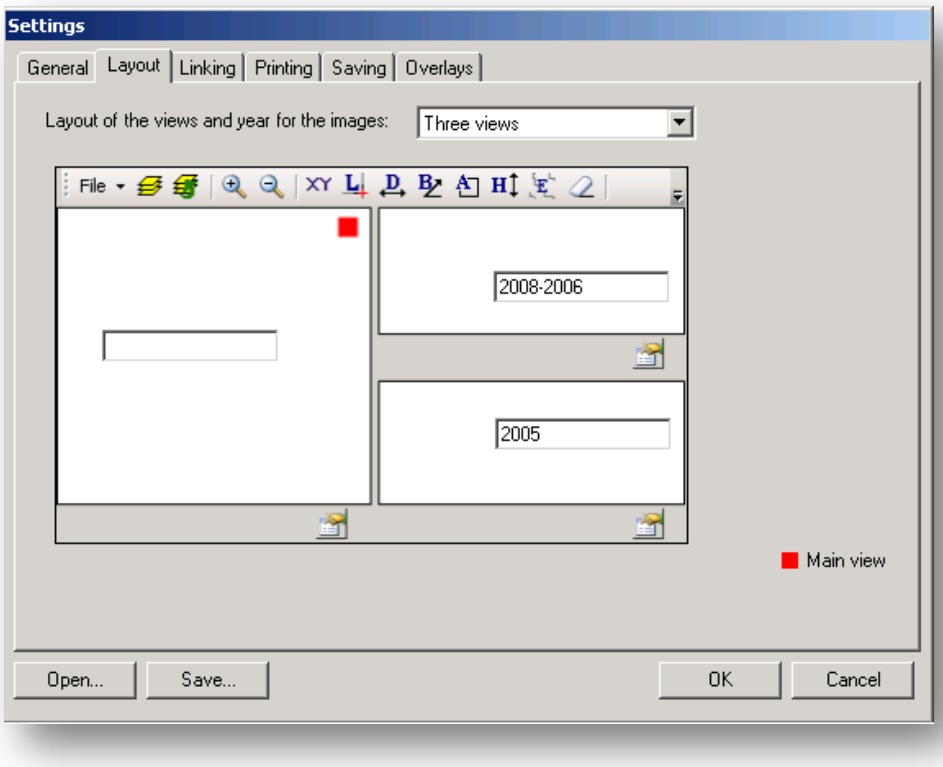
To change the layout and image dates using the settings dialog:

1. Click in Settings > Open settings dialog menu to open settings dialog.



2. In the dialog select the Layout tab and select the preferred layout in the upper dropdown box. For each view in the layout, it is possible to select the preferred year of the BlomURBEX imagery to be shown as explained later.
3. If needed, click Save to save the settings to disk for future use.
4. Click OK to save the settings in user registry. Next time BlomURBEX Viewer opens the preferred layout will remain in the interface.

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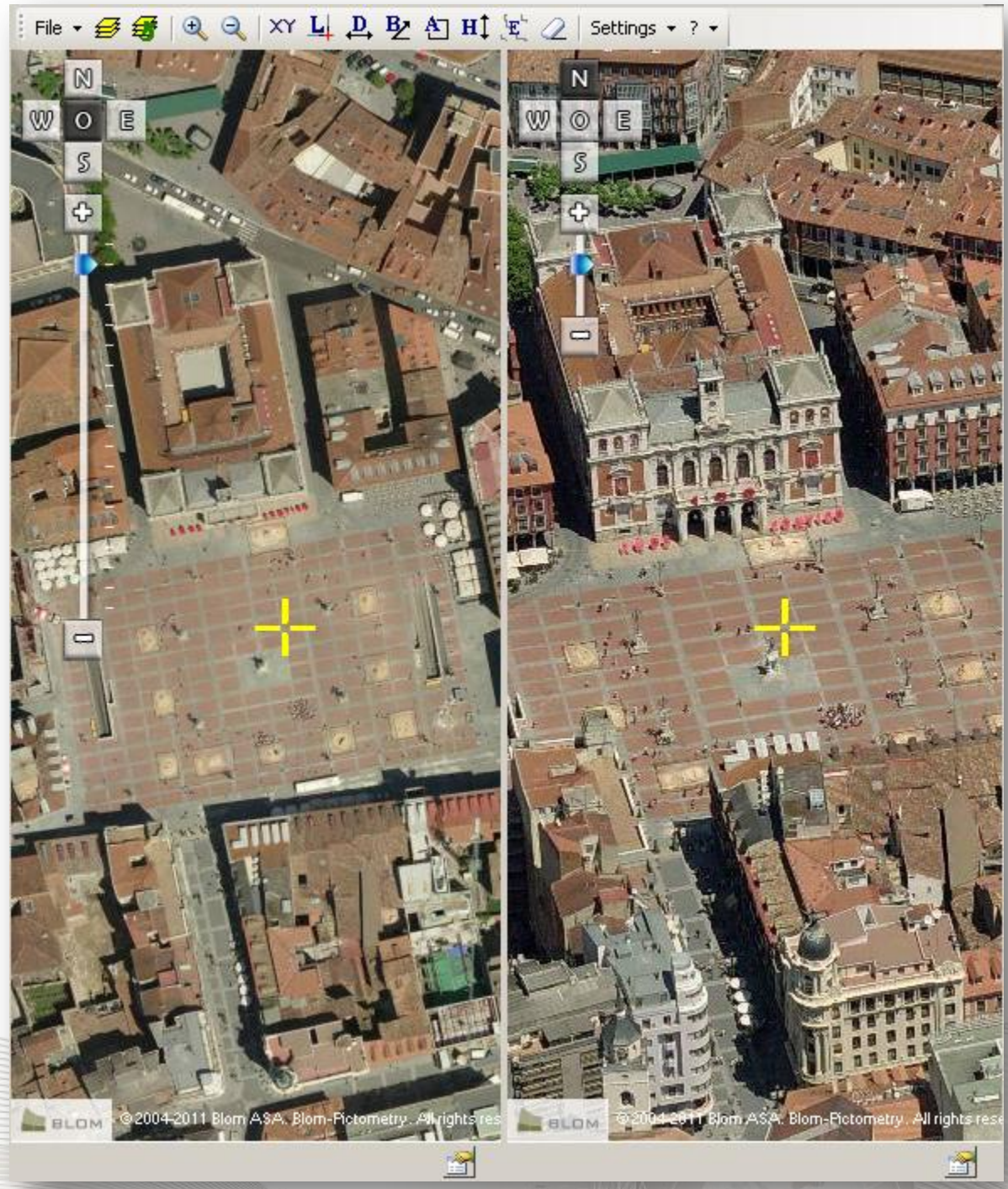

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6 Viewing BlomURBEX images

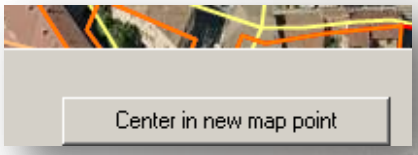
The BlomURBEX Viewer is the window that shows BlomURBEX images. To open an image is needed to select a location, either clicking in the basemap in Autodesk Map 2007/2008/2009 or introducing a known coordinates.

6.1 Selecting location in Autodesk Map 2007/2008/2009

1. Open Autodesk Map 2007/2008/2009 with a basemap.
2. Open BlomURBEX Viewer if it is not, as explained previously.
3. Ensure that settings are correct, as previously indicated.
4. Resize and move application windows so they can be seen comfortably.
5. Open any map data in Autodesk Map 2007/2008/2009. The data can use any projection if it is in the EPSG list in the BlomURBEX Viewer options. It is only needed to know the projection and to indicate this projection in the BlomURBEX Viewer settings dialog.

Remember when using different drawing files in Autodesk Map with different projections to modify the options in BlomURBEX Viewer matching the active one.

1. Once everything is right set, and with a map drawing opened, click in the "Center in new map point" button at the bottom of the BlomURBEX Viewer. Click OK in the message that appears and then move mouse cursor over the map display and click inside it. A message requesting a point will appear. Type the exact coordinates and press Enter or select a point clicking in the map.



2. After some seconds BlomURBEX Viewer will open the best Blom images for that location, in all the orientations selected in the BlomURBEX Viewer layout. The images are centered in the selected point and show a crosshair. If no image appears consider if your user permissions do not allow seeing images for that location.

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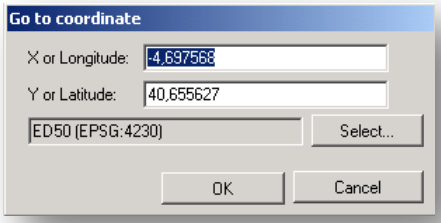
6.2 Introducing known coordinates in BlomURBEX Viewer

1. In BlomURBEX Viewer toolbar click in the tool "Go to coordinates…" . The "Go to coordinate" dialog is opened.



2. Introduce a correct longitude or X and latitude or Y coordinates. Indicate the projection for this coordinates clicking in Select. This opens the same Select projection dialog that we see when selecting the basic options. By default, the last projection selected in the Settings dialog is offered here, but it can be changed, so we can ask for coordinates in any of the supported projections.
3. Click OK.
4. After some seconds BlomURBEX Viewer will open the best BlomURBEX images for that location, in all the orientations selected in the BlomURBEX Viewer layout. The images are centered in the selected point and show a crosshair. If no image appears consider if your user permissions do not allow seeing images for that location.

6.3 Panning images

"Panning" is the default behaviour of the display when no tool is selected.

1. In BlomURBEX Viewer unselect any tool in the toolbar.
2. Click and hold the left mouse button in the view to pan.
3. Drag the image up, down, left, or right within the view, and finally release mouse.

6.4 Magnifying images

It is possible to zoom in for more detail or zoom out for more context information. Simply change the image's magnification by using the zoom buttons on the toolbar.

Zooming in all views

Use the "Zoom In" button to increase the magnification of an image.

To zoom in:

1. Click the "Zoom In" button on the toolbar .
2. The magnification percentage is doubled. (The part of the image that was centered in the display remains in the center.) . The "Zoom In" button affects all the images opened in the layout.
3. Continue clicking the button until reached the desired amount of magnification.

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Zooming out all views

1. Click the "Zoom Out" button on the toolbar . The "Zoom Out" button affects all the images.
2. The magnification is reduced by half.
3. Repeat Step 1 until zoomed out the desired amount.

Zooming in or out with the mouse wheel in one view

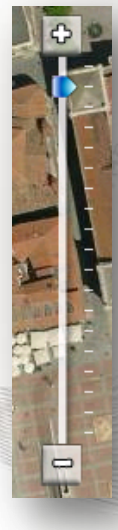
1. Move the mouse wheel frontwards or backwards to zoom in or out in just one view.

Zooming to a extent in one view

1. Unselect any tool selected in the toolbar so the "Pan" default tool activates.
2. Press SHIFT key in keyboard.
3. Click with left mouse button in any view and hold pressed. Drag to draw a rectangle. A rectangle appears showing the extent selected. Release button at the ending corner.
4. Map centers and zoom to the best level zoom that contains the selected extent. This action only affects the view used.

Zooming with the zoom bar in one view

1. Each view has a zoom bar with a "+" button on top and a "-" button on bottom. Click "+" button to increase the zoom level, or "-" to decrease the zoom level. There are 20 zoom levels available for the "continuous" or "Ortho" view mode (see below about view modes). There are 6 zoom levels available for the "photo by photo" or "Oblique" mode. The last two levels in "Oblique" mode are a resample of level 4.
2. Alternatively drag the level indicator up or down to increase or decrease any number of zoom levels. Every view in the layout has its own level indicator, so changes in this only affect the view that contains that level indicator.



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6.5 Changing views

Initially each view in the layout has set an orientation, but it is possible to modify this selecting orientations orientation selector. In fact, it is possible to have the same image several times. For example, it is possible to use the dual view to have two times the same ortho image opened. It can be useful to have a master – detail view to study two distant buildings at the same time that are in the same photo. Each time an orientation is changed in a view; this setting is saved in user registry so it will be used until changed again.

There are two types of view modes: "Ortho", that shows the images in a continuous mode, and "Oblique", that shows images one by one. In both modes it is possible to do "Pan" in the map endlessly. In the Oblique mode a new image is loaded in a seamless way when "panning" reaches the border of the current loaded image.

Oblique imagery shown in a "continuous" or "Ortho" mode may suffer some distortion due to the irregularities of the terrain model that affects the ortho-rectification process. In flatter terrains the distortion is less.

Tools are unselected when the view mode changes. Remember to select again the tool if using one when the mode is changed.

There are five types of orientations: "Ortho" orientation, that shows the image as an ortho-photo; "North", that shows the image looking from south to north; "South", from north to south; "East", from west to east; and "West", from east to west. To change the orientation click in the "O", "N", "S", "E" or "W" buttons in the upper left control to activate the "Ortho", "North", "South", "East" and "West" orientations, respectively.

The size of each view in the layout can be changed through the use of splitter bars between the views. Just move the mouse in the boundary of two views, and when the cursor changes, drag and drop the splitter to change the size of the views. Each time the size is changed this setting is saved in the user registry.

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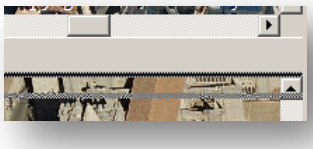

6.6 The intelligent behavior

At closer zoom levels, oblique rectified images show big distortion on the buildings, while at furthest zoom levels they do not offer better information than the ortho images.

Each view in the BlomURBEX Viewer is configured in an intelligent way so that any request that attempts to change the zoom level of the view will check if the view is displaying any orientation other than Ortho, and in this case decide what set of images should be displayed: ortho, oblique rectified or natural obliques.

6.7 Changing basemap ortho image

By default the ortho image shown as basemap is one from several images available in BlomURBEX server. These images are visible are certain resolutions:

- Satellite images, with low resolution of the data. This source data is available in the furthest zoom levels (1 to 13), and contains Blue Marble and Landsat 7 imagery.
- Countryortho is imagery covering a whole country (or a region). This source data is available in the medium zoom levels (13 to 19), and contains imagery from several providers and from Blom.
- Blom imagery captured with Pictometry cameras, also called "pictometry" images in the BlomURBEX server. This source data is available in the zoom levels with the maximum resolution (14 to 20).

As can be seen at certain zoom levels these three sources coexist. For that zoom levels with more than one image available, the BlomURBEX server priorizes first the "pictometry" image, then the "countryortho", and finally, the "satellite". It is possible to change this priority in the options.

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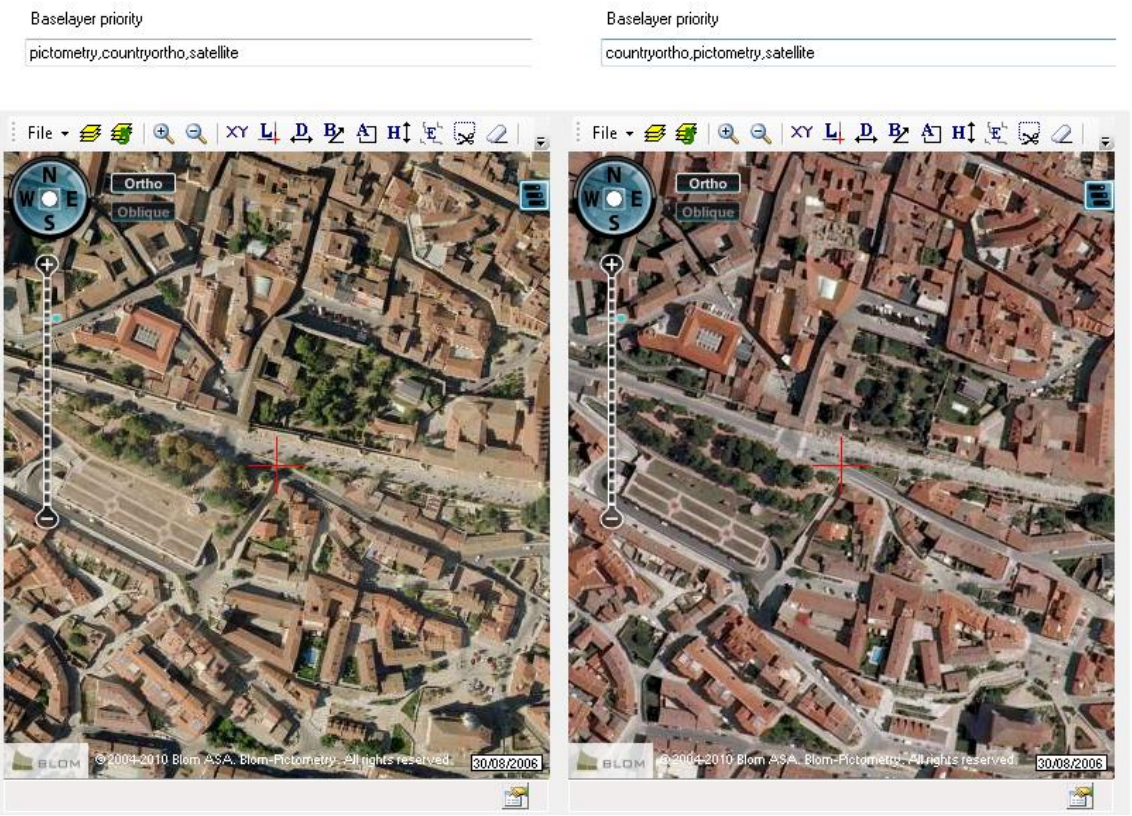

In the textbox "Baselayer priority" of the General tab of the Settings dialog, change the text to consider other priorities in the images for the basemap. For example, in the next screen capture, the left shows the default priority with the "pictometry" imagery by Blom in the zoom level 18, and the right shows a different priority that renders the "Countryortho" imagery, that is also available for that zoom level.

Be careful to type the correct names in the Baselayer priority textbox, or no image will be shown. Type the names separated by commas and without any blank spaces.

6.8 Showing the visible and total extension in Autodesk Map 2007/2008/2009

It is possible to see the visible and total extent of the opened BlomURBEX images drawn in Autodesk Map 2007/2008/2009. To do this follow this steps:

1. In BlomURBEX Viewer, select the menu Settings > Open Settings dialog. In the Settings dialog select the Linking tab. Ensure that checkbox "Display image visible extent on linked mapping application" is checked for viewing the visible extent, and that checkbox "Display image total extent on linked mapping

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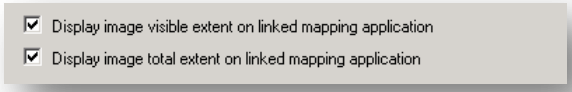
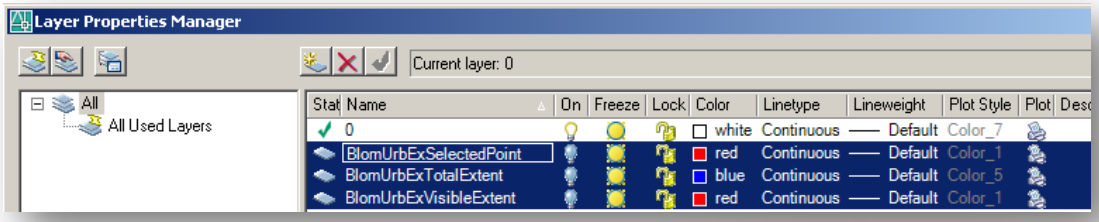
application" is checked for viewing the total extent. Uncheck the checkboxes to not update the extents in Autodesk Map 2007/2008/2009. The total extent only has sense when the view mode is "photo by photo" also called "Oblique" mode.


Display image visible extent on linked mapping application
Display image total extent on linked mapping application

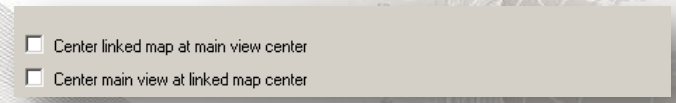
2. Modify the visible extent of BlomURBEX Viewer by panning or zooming in the current image, or requesting other image.
3. After a moment the boundaries will be drawn in Autodesk Map 2007/2008/2009. Boundaries are drawn using two layers in Autodesk Map 2007/2008/2009. By default visible extents are drawn in the color with index 3 in the current color table and total extents in the color with index 1. Modify this color indexes to show the extents in better colors. Ensure that the current colors do not match the background color or extents will not be visible. Also ensure that these layers in Autodesk Map 2007/2008/2009 are visible and are rendered using colors by layer.
4. Another way to avoid the refresh of the visible an total extent, and also to avoid the refresh of the red crosshair with the center, is to set the appropriate layer to not visible in the Layer Properties Manager once this layers are added to the Autodesk Map drawing.


Layer Properties Manager
Current layer: 0
All
All Used Layers
Stat Name On Freeze Lock Color Linetype Lineweight Plot Style Plot
0 white Continuous Default Color_7
BlomUrbExSelectedPoint red Continuous Default Color_1
BlomUrbExTotalExtent blue Continuous Default Color_5
BlomUrbExVisibleExtent red Continuous Default Color_1

6.9 Synchronizing views

It is possible to synchronize the several views in the BlomURBEX layout, and synchronize the main view in BlomURBEX with the linked map in Autodesk Map 2007/2008/2009. To do this follow this steps:

1. Open the Settings dialog and select the Linking tab.



To update Autodesk Map 2007/2008/2009 map center when BlomURBEX main view changes:

2. The main view in BlomURBEX is one of the opened views. Depending on the layout the main view changes. The settings dialog marks which is the main view for each layout type. This view can be in sync with the linked map

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application. For it check the "Center linked map at main view center". Now each time the location of the BlomURBEX main view changes, the map will be refreshed to show that location.

To update the main view in the BlomURBEX layout with Autodesk Map 2007/2008/2009:

3. The main view in BlomURBEX is one of the opened views. Depending on the layout the main view changes. The settings dialog marks which is the main view for each layout type. This view can be in sync with the "Autodesk Map" map. For it check the "Center main view at linked map center". Now each time the center of the "Autodesk Map" map changes, BlomURBEX main view will be refreshed to show that location.

6.10 Seeing historical images from different years

It is possible to show imagery for different years in each view, facilitating user to follow the changes occurred in a spot of the city. To do this, follow these steps:

1. Open the Settings dialog and select the Layout tab.
2. For the current layout, a set of textboxes for each view is shown in the dialog. Enter a year or a range of years, inside these textboxes to filter that view for a particular point in time. The date filter should follow one of these structures: YYYY-YYYY and YYYY, where YYYY is the year number with four digits.
3. For example: "2005-2008" will return the most updated image available inside the range of years, including both bounding years. In this example, if an image of 2007 is available and no image in 2008 is available, then the image of 2007 is returned. But if no image is available between 2005 and 2008, and only an image of 2009 is available, then no image will be returned.
4. Another example: "2006" will return the most current images available, whose date is previous to the requested date. In this case if several images are available previous to the year 2006 or from that year, then the last one will be returned.
5. If the default value is empty, then the most updated image will be requested.
6. If a wrong value is sent, then no image will be returned.
7. The settings will affect also the Extract image or Export image tools when applied to the views with a date filter.

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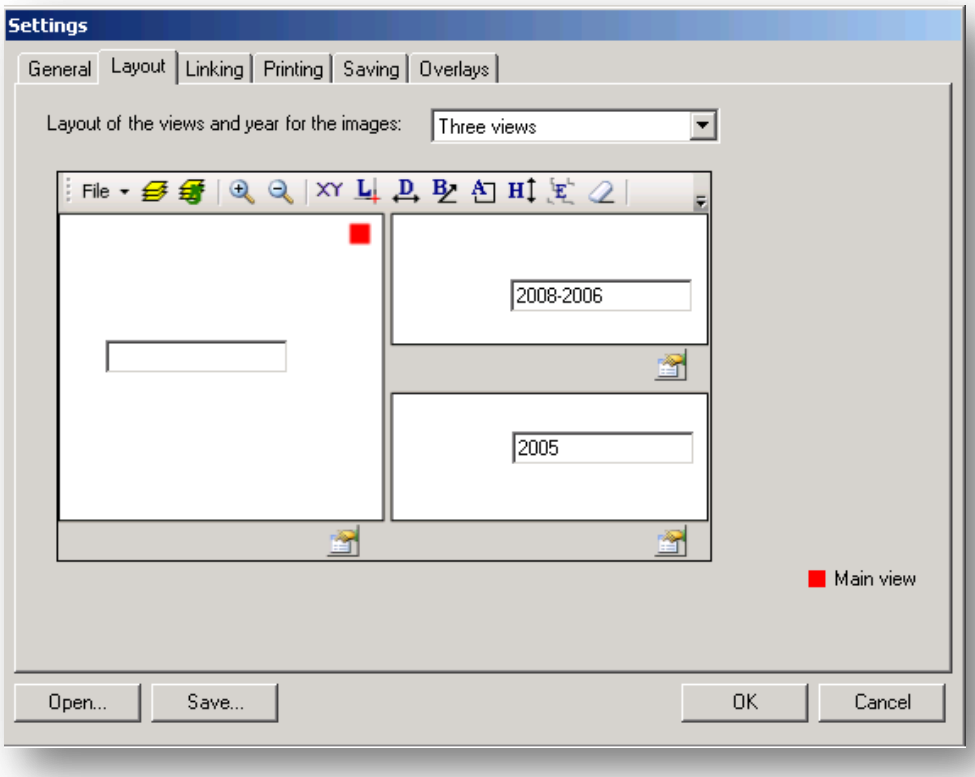

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Above both views of Eiffel tower from 2008 and 2009

The option to change the date of the BlomURBEX images allows to see side by side the same part of a city in different years. Up to five different years could be shown at a time. Just select the same view mode and orientation, and explained below, for each view in a multi-view layout, but choose different years for each view.

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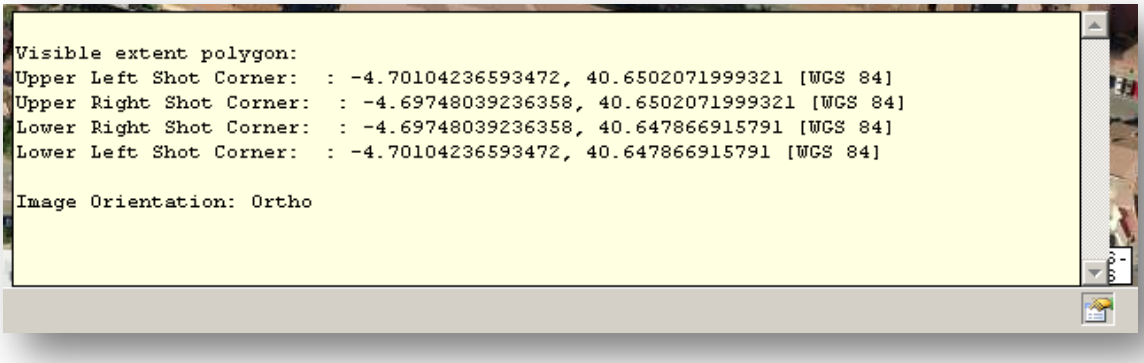
7 Obtaining image information

To obtain the information about the current opened image, click in the Image Properties button in any status bar of the views. A panel will open showing extent coordinates in WGS84 lon/lat for the full image (in obliques) and for the visible portion and other data if available. To hide the panel click again in the button.


Visible extent polygon:
Upper Left Shot Corner: : -4.70104236593472, 40.6502071999321 [WGS 84]
Upper Right Shot Corner: : -4.69748039236358, 40.6502071999321 [WGS 84]
Lower Right Shot Corner: : -4.69748039236358, 40.647866915791 [WGS 84]
Lower Left Shot Corner: : -4.70104236593472, 40.647866915791 [WGS 84]
Image Orientation: Ortho

Info in ortho view

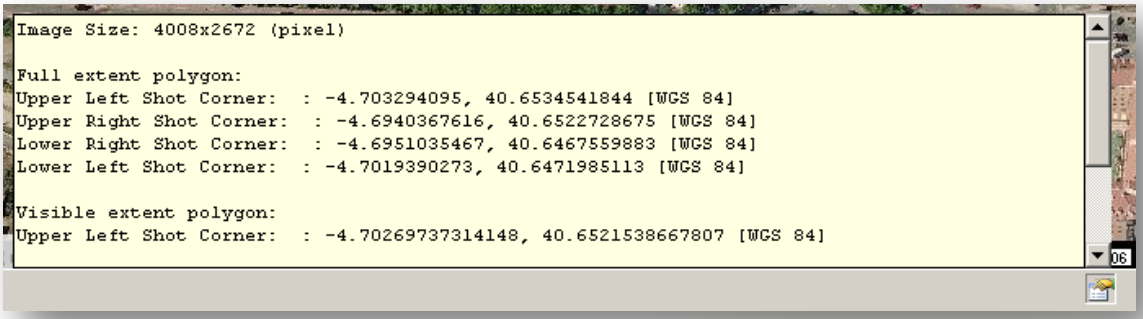


Image Size: 4008x2672 (pixel)
Full extent polygon:
Upper Left Shot Corner: : -4.703294095, 40.6534541844 [WGS 84]
Upper Right Shot Corner: : -4.6940367616, 40.6522728675 [WGS 84]
Lower Right Shot Corner: : -4.6951035467, 40.6467559883 [WGS 84]
Lower Left Shot Corner: : -4.7019390273, 40.6471985113 [WGS 84]
Visible extent polygon:
Upper Left Shot Corner: : -4.70269737314148, 40.6521538667807 [WGS 84]

Info in oblique view

To copy the image data just select the text in the panel, click the right mouse button, select copy, and paste it anywhere.

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8 Using the measurement tools

BlomURBEX Viewer offers various tools for measuring features visible in images. For example, it is possible to measure the distance between two points, the elevation of the terrain, building heights, bearing, area, perimeter, and the coordinates of a point.

Before using the measurement tools, be sure that the unit of measure is set as desired.

8.1 Changing units of measure

To change units of measure:
1. In BlomURBEX Viewer click the menu Settings > Open Settings dialog. The Settings dialog box opens.
2. In the General tab click the desired units: Meters or Feet.
3. Click OK.

The changes remain in effect until units are changed again.

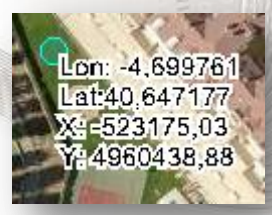
8.2 Viewing the coordinates of a location

Use the Location Tool to determine the location (the coordinates) of an object in an image both in ortho or oblique views.

To determine the location of an object:

1. In BlomURBEX Viewer click the Location Tool .
2. Click the desired location on the image.
3. The point's coordinates appear drawn in the view. If the projection selected in the Settings dialog is not Spherical Mercator, the same coordinates will be seen in both systems, Spherical Mercator and the selected one, in the desired units, meters or feet.

For Oblique images, remember to click near the base of buildings for more accurate coordinates.



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8.3 Measuring squared perimeter or distance

Use the Distance Tool to measure perimeter—the distance around the outside edge of an object or distances both in ortho or oblique views.

To measure perimeter by using a parallelogram or measure distances:

1. Click the Distance Tool .
2. Starting with one corner of the object, click with the left mouse button.
3. Click again for each new vertex. The outline of a polyline appears as new vertexes are added. In oblique mode take in mind that a workaround to the server must be done in each vertex and the measure takes longer.
4. When the polyline surrounds the shape being measured or distance being measured, double click with left mouse button.
5. The partial measurements and total length appears drawn in the view.

8.4 Measuring bearing

Use the mouse to draw one line to measure bearing both in ortho or oblique views. Where start drawing the line is important, as shown in the following illustrations:

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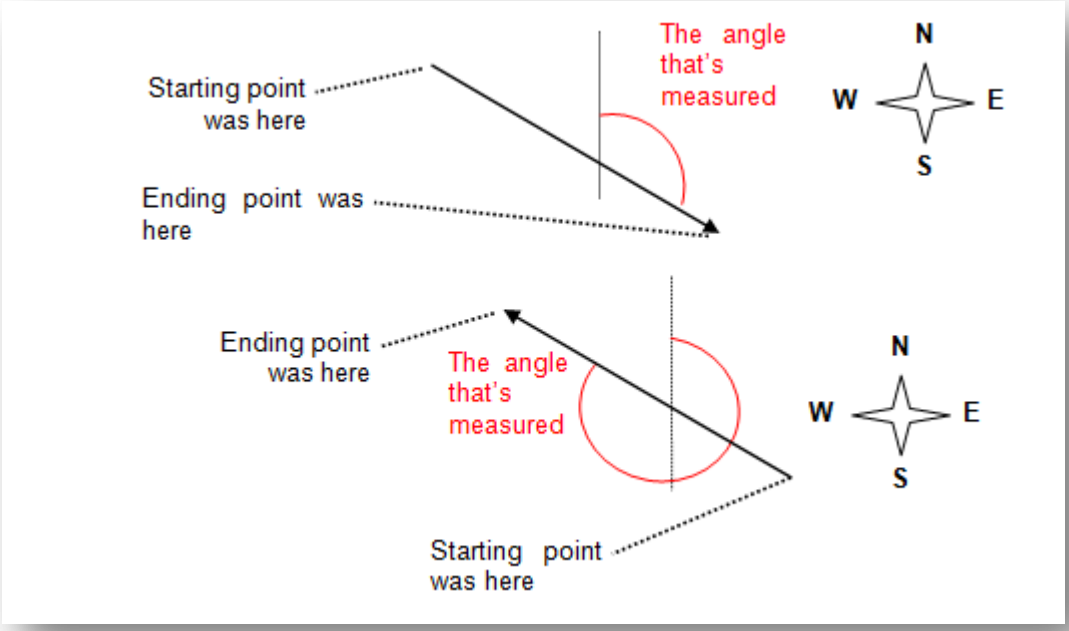

To measure bearing:

1. Click the Bearing Tool .
2. Click with the left mouse button on the starting point.
3. Click with the left mouse button on the ending point in the direction you want to measure the bearing of. The measurement appears drawn in view.

8.5 Measuring area

The Area Tool lets to measure the area of any linear shape both in ortho or oblique views. After the perimeter of the area to be measured is outlined, the area measurement appears in view.

To measure the area of any straight-sided shape:

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1. Click the Area Tool .
2. Click in the display at the desired starting point.
3. Click again for every new vertex of the area. A polygon that returns to initial point is drawn automatically.
4. When outlined the entire perimeter, double click in the last vertex.

8.6 Measuring height

Use the Height Tool to measure the height of an object in an Oblique image. (Because orthogonal images are captured straight down, the Height Tool doesn't apply to the "continuous" or "Ortho" view mode.)

To measure height:

1. Click the Height Tool .
2. Click with the left mouse button on a point at the base (where it meets the ground) of the object we want to measure the height of.

Important: Be sure to measure height by starting at ground level and moving upwards. If the ground level starting point is not seen, then estimate its location.

3. Move the mouse upwards and click a new vertex at the ending point.

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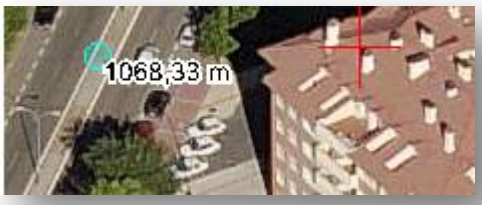
4. The measurement appears drawn in view.

8.7 Measuring elevation

Use the Elevation Tool to measure the elevation (height above sea level) of a point in an image.

To measure the elevation:

1. Click the Elevation Tool .
2. Click the point whose elevation to measure.
3. The measurement appears drawn in view.



8.8 Clearing measurements

Use the Eraser Tool to clear measurements in the map display.

To clear measurements:

1. Click the Eraser Tool .
2. The measurements are removed in all available views.

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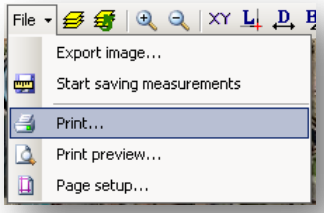
9 Printing images

BlomURBEX Viewer let print all the views opened to the selected printer, setup the page options and preview the printing, along with the image properties if they were activated in the settings dialog. Before printing, scroll or pan the image so that the portion we wish to print is visible in the display. Also resize the views with the splitters and the size of the BlomURBEX Viewer window. The visible portion of each image, and with the exact pixel size, will be send to printer.

9.1 Printing images

To send all the current views to the printer with the current settings:

1. Click the File > Print menu.



2. The views are printed.

Each view in the layout is printed in different pages also with the image information activated in settings. If the image information is longer than the page space, it will be cropped. In this case, try reducing the size of the BlomURBEX Viewer views or window, or limit the amount of information to print in settings dialog, as explained below.

9.2 Changing print settings

To change the printing settings:

1. Click the Settings > Open Settings dialog menu.
2. The settings dialog opens. Select the Printing tab.
3. Check or uncheck the options wanted.
4. "Display image properties" adds the corner coordinates of the image to the output (if the image is a oblique one) and other properties.
5. "Display the visible extension of the image" adds the corner coordinates of the visible portion of the image.
6. "Display shot date" adds to the output the shot date of the image.
7. Click OK in the Settings dialog to save changes.

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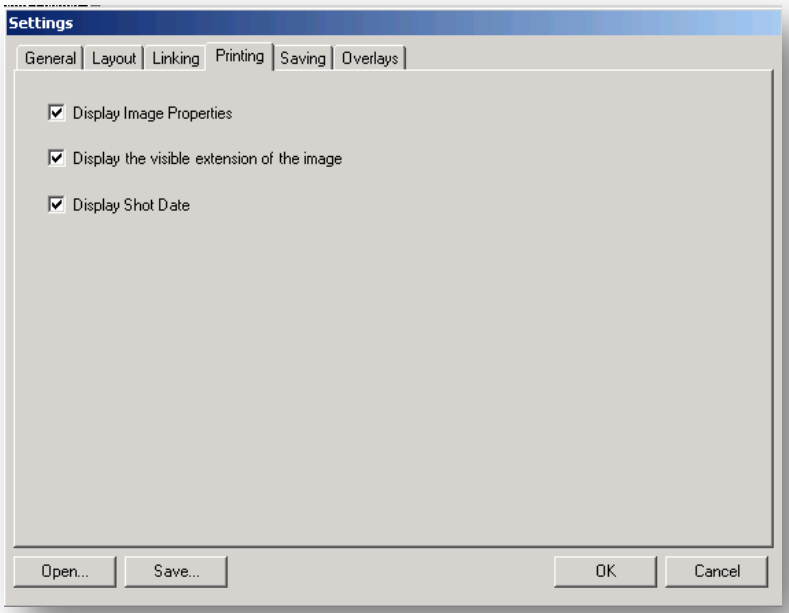
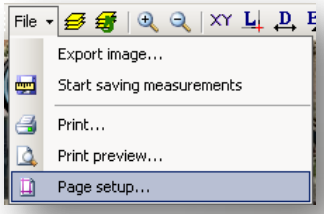


9.3 Page setup

To change page settings:

1. Click the File > Page setup menu.

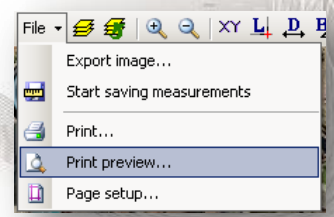


2. The Page setup dialog opens. Modify the page margin, orientation, etc. as desired. Click OK to accept changes.

9.4 Print preview

To preview the print:

1. Click the File >Print preview menu.



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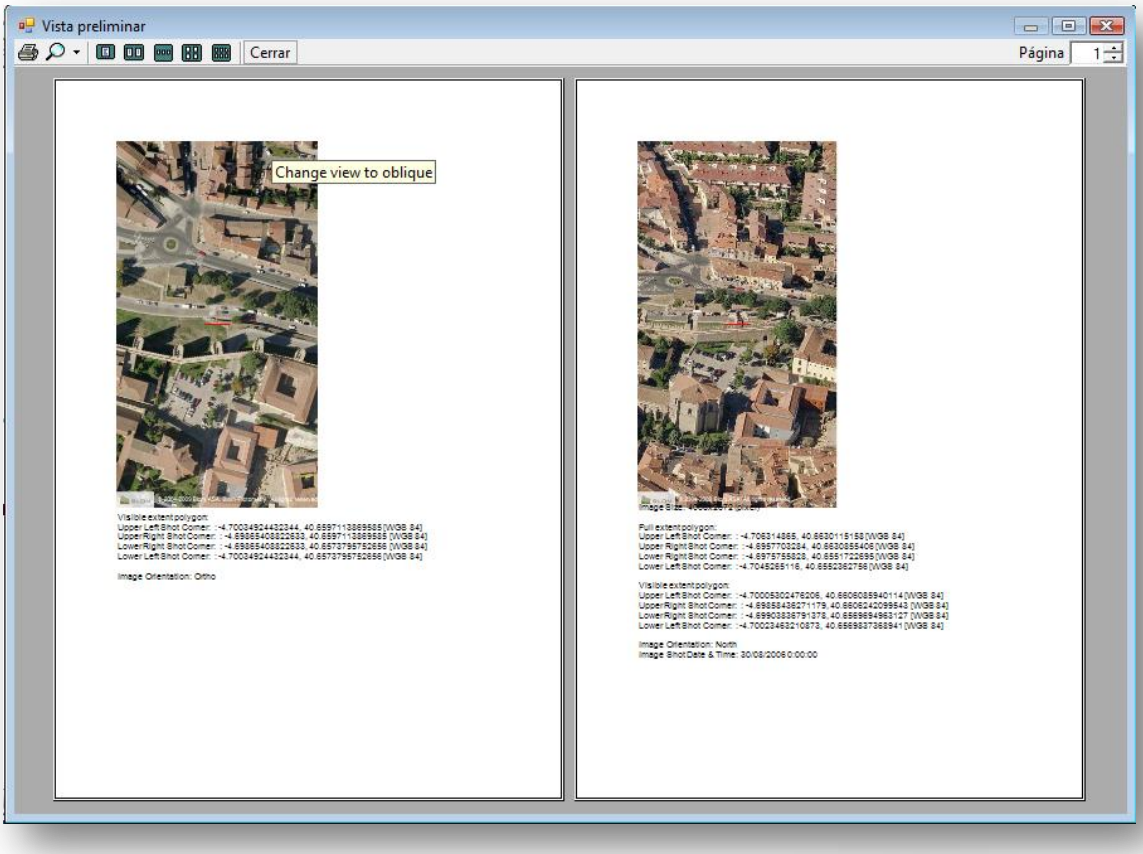
2. The Print preview dialog opens. Click in the options to see the print at different zooms o layouts. Also it is possible to print clicking in the Print button. The dialog can be resized to full screen.



The image shows the preview of a dual view layout. Each view and its properties are print in different pages.

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10 Exporting images

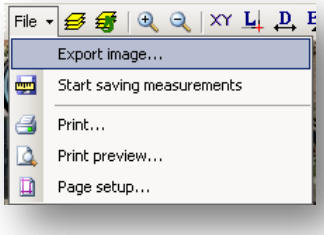
10.1 Exporting all visible views

The BlomURBEX Viewer "Export image" menu lets exporting the visible extent of the active views to a set of JPG files.

To export an image:

1. Pan in the views to display the extent desired.
2. Click the "File > Export image…" menu.
3. In the Save as dialog that opens introduce the path and filename for the file.

The extracted image or images are saved with the filename specified. If the BlomURBEX layout shows several views, then several files will be created and all the files will be suffixed with a view number and orientation. Also, if view is in ortho mode, a world file (JGW) is saved for easy integration of the image in other GIS packages.



10.2 Projection of the extracted ortho images

The projection of the extracted ortho images are "Spherical Mercator", the projection labelled by EPSG as 'Popular Visualisation CRS / Mercator' in March 2008 with code number 3785. Due to limited support to this projection in Autodesk Map 2007/2008/2009 version, a transformation of the exported images using other software would be necessary to open them in Autodesk Map 2007/2008/2009.

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11 Saving measurements

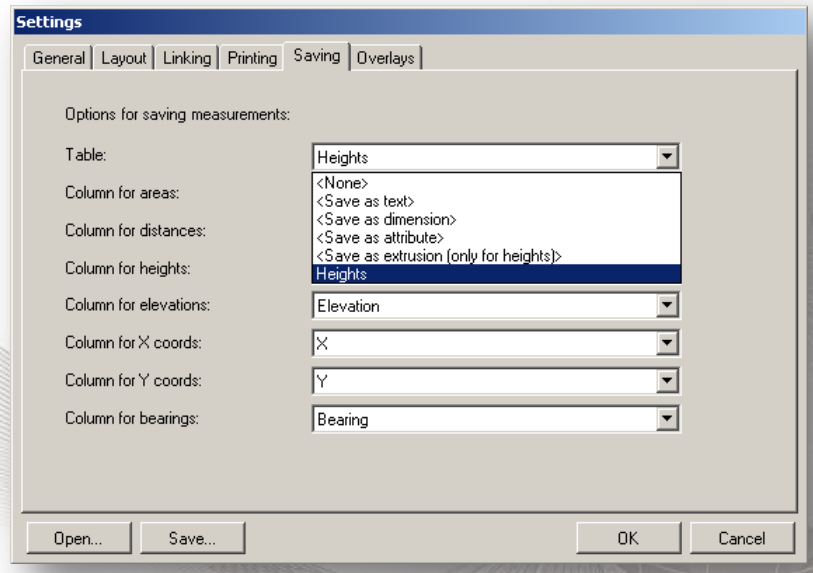
BlomURBEX Viewer is able to notify when the user has made measurements in order to store this measures into any opened table in Autodesk Map 2007/2008/2009.

11.1 Setting measurement savings

To activate the measurement storage, it is needed to complete two one-time setup tasks. It is needed to specify some options about the place where store the measurements, and some options about the units and the projection to use (in the case the measurements are locations).

To specify the options regarding the place to store measurements:

1. Click in the "Center in new map point" button once. When this button is clicked, the Saving options are updated for the current drawing opened.
2. Click in the Settings > Open Settings dialog menu.
3. The Settings dialog opens. Select the Saving tab.
4. Select a mode for saving measurements from the Table dropdown list. The options for saving measurements are: "<Save as text>", that inserts a text with the measure; "<Save as dimension>", that creates a dimension (only has sense for linear or angular measurements); "<Save as attribute>", that creates a block with the measurements as attributes; "<Save as extrusion (only for Heights)", that saves the measurements as Z values inside the geometry (only has sense for height measurements) ; finally, the rest of options represent the object data table names contained in the Autodesk Map drawing.



5. Each option of the Table dropdown list populates different sub-options in the Column dropdown lists:

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- For "Save as text" mode, only a "<Save as text>" option is given. Select this sub-option for that type of measurements you want to save as texts, and leave as "<None>" for that measurement not to be saved.
- For "Save as dimension" mode, two sub-options (Linear dimension and Angular dimension) are given. Select "Linear dimension" for distances and heights measurements, and select "Angular dimension" for bearing measurements, because for the other type of measurements this saving has no sense.
- For "Save as attribute" there are multiple sub-options, one per each type of measurement. In this last case the sub-options represent names for blocks and attributes that will be added to drawing for storing the measurements.
- For "Save as extrusion (only for heights)" mode, only a sub-option "Save as extrusion (only for heights)" is given. Select this sub-option for height measurements only. This option will extrude one or several region objects selected.

6. As seen in the screenshot, it is possible to select a sub-option from the dropdown lists for each type of measurement to save. It is possible to store seven different type of measurement. The table summarizes the relation between the BlomURBEX Viewer tools and the Column dropdown used to make the savings.

In BlomURBEX Viewer the tool used is ...	In Autodesk Map 2007/2008/2009 measurements are saved in the field selected in dropdown...
	Column for areas
	Column for distances
	Column for heights
	Column for elevations
	Column for X coords and Y coords
	Column for bearings

7. To store only some measurements, select <None> for those measurements in the dropdown lists.
8. Click in OK to save settings.

To specify the options regarding the units and the projection to use in locations:

1. Click in the Settings > Open Settings dialog menu.
2. The Settings dialog opens. Select the Saving tab.
3. Select the desired units, meters or feet. The values will be stored in the units selected.
4. Select the Linking tab.
5. In the "Save location measurements" groupbox, choose "in Spherical Mercator projection" for storing location data in Spherical Mercator meters in Autodesk Map 2007/2008/2009, or choose "in selected map projection", more

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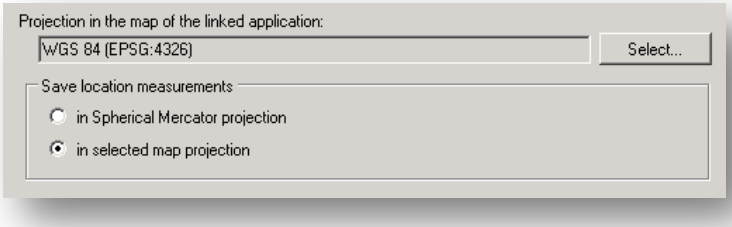
usual, for storing location data in the projection of the current map in Autodesk Map 2007/2008/2009. This setting only affects the Location tool.

6. Click OK to save settings.



11.2 Starting and stopping save sessions

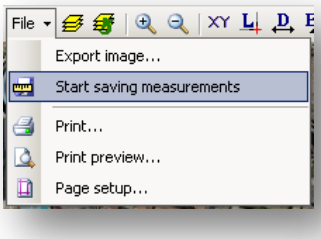
In BlomURBEX Viewer it is possible to start, pause and continue the savings through an option.

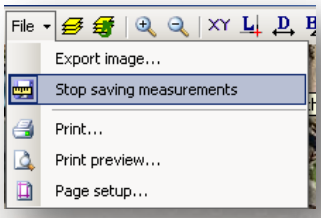
To start a save session:

1. Click in the "File > Start saving measurements" menu if it is unchecked. The menu will toggle to a checked state and measurements will be stored (if fields were correctly set).

To pause a session:

1. Click in the "File > Stop saving measurements" menu if it is checked. The menu will toggle to an unchecked state and measurements will be paused.





11.3 Procedure for saving measurements

The procedure for saving measurements is this:

1. Ensure that the "Start saving measurements" menu is checked so the text in the menu is now "Stop saving measurements".
2. Now in BlomURBEX Viewer do a measurement as described in this manual. A message to confirm the saving appears, informing about the measurement that is going to be saved, and the method and sub-option to be used. Click Yes to proceed.
3. An input box appears, for methods "Save as text", "Save as dimension" and "Save as attribute", to define a text height in map units that will be used to draw texts in Autodesk Map. Type a height value and click OK.
4. Click in the map display to activate the Autodesk Map commands.

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5. If the mode for saving was "Save as text", the user will be prompted for a point where to insert the text. Enter a known coordinates and press Enter or click a point in the map.
6. If the mode for saving was "Save as dimension" and the sub-option was "Linear dimension", the user will be prompted for a point where to start creating the dimension. Enter a known coordinates and press Enter or click a point in the map. Next the user will be prompted for a point where to finish creating the dimension. Enter a known coordinates and press Enter or click a point in the map. Finally the user will be prompted for a point where to position the dimension. Enter a known coordinates and press Enter or click a point in the map.
7. If the mode for saving was "Save as dimension" and the sub-option for storing measurements was "Angular dimension" then the user will be prompted for a point where to position the vertex of the angular dimension. Enter a known coordinates and press Enter or click a point in the map. Next the user will be prompted for a point for the first reference point. Enter a known coordinates and press Enter or click a point in the map. Next the user will be prompted for a point for the second reference point. Enter a known coordinates and press Enter or click a point in the map. Finally the user will be prompted for a point where to position the dimension. Enter a known coordinates and press Enter or click a point in the map.
8. If the mode for saving was "Save as attribute" the user will be prompted for a point where to position the block with an attribute. Enter a known coordinates and press Enter or click a point in the map.
9. If the mode for saving was "Save as an extrusion" the user will be prompted to select one or several region objects. Select the objects you want to extrude and press Enter. To see the result of the extrusion, you should change the view of the map to a 3D viewport.
10. If the mode for saving was to save in a data object table the user will be prompted to select one or several drawing objects. Select the objects you want to have a data object inserted with the measurement and press Enter. If the table and field selected in BlomURBEX Viewer settings are no more defined in the current Autodesk Map drawing then a warning message will appear. In this case change the Viewer settings and try again saving the measurement.

11.4 Example: how to extrude features to 3D

In this example, the saving measurements capabilities will be used to extrude 2D features (buildings), to convert them to 3D features using the Height measurement tool. Follow the steps below:

1. Open Autodesk Map 2007/2008/2009 and a dwg file with 2D features.
2. Features to be extruded must be regions, so if it not the case, select the Draw > Region command, or the Region tool from the Draw toolbar in Autodesk Map. Then select the features to be converted to regions and press Enter. When doing this be aware that the new feature is added to the active layer.

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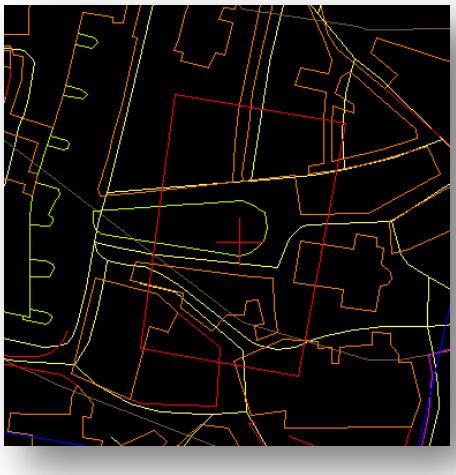
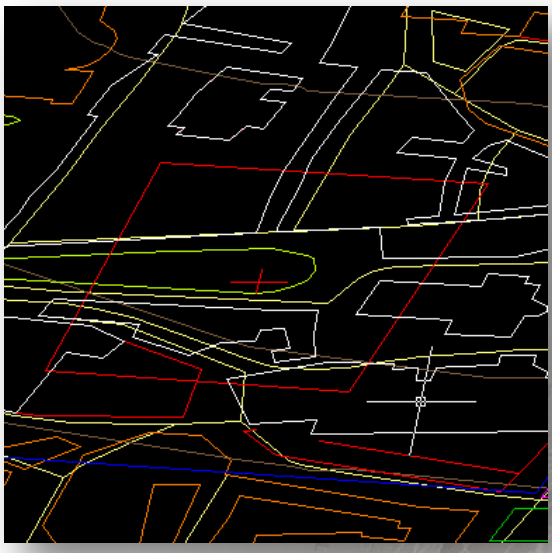


On the left the building footprints (orange) before converted, drawn as polylines, and on the right, after using Region tool (white).

3. Tilt the view using the View > 3D Orbit menu to better appreciate the 3D conversion.



4. Open the BlomURBEX viewer if it was closed. Click in "Center in new map point" button and select a point in the map in the middle of the zone of interest. Switch to a oblique view. If view does not switch to any oblique view, check the "intelligent behaviour" and zoom in to closer zoom level, and then retry changing to any oblique view modes (North, South...). When the city buildings are best viewed, then proceed to next step.

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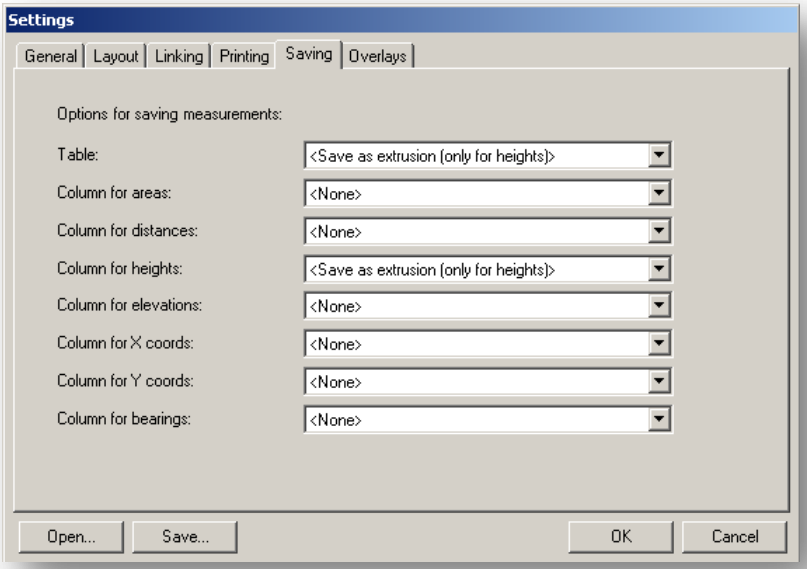

5. Change "Saving" settings in the Settings dialog as previously indicated. In the Settings dialog set the table name to "<Save as extrusion (only for heights)>", and in the column for heights dropdown box select "<Save as extrusion (only for heights)>".
6. Check the File > Start saving measurements in BlomURBEX viewer toolbar to initialize saving session.
7. Select the Height tool. Measure heights in the buildings. Each height measured a message box appears with information about the measure to be saved. Click Yes to proceed. Then select the feature or features to extrude. Finally press Enter. The selected features are extruded.

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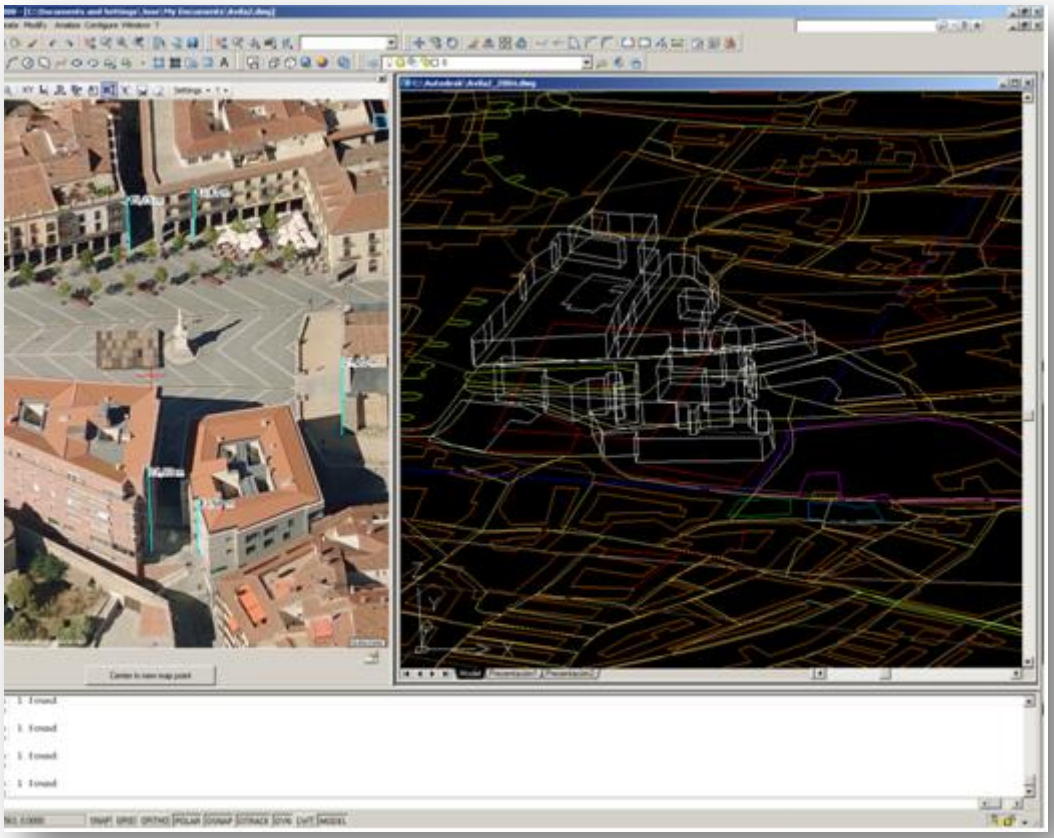

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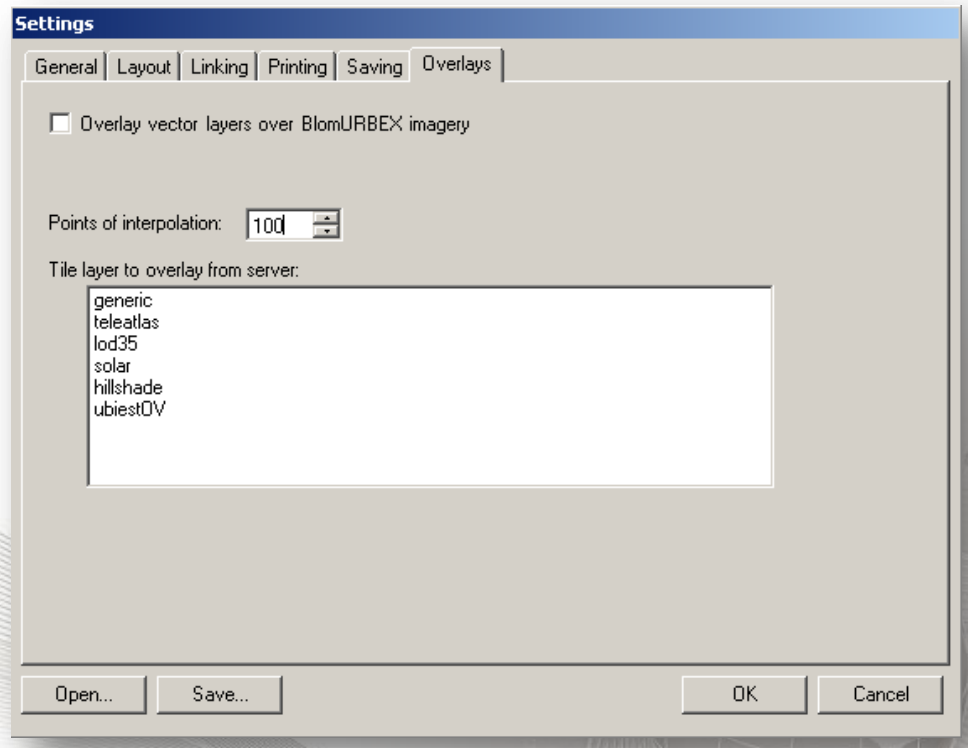
12 Overlaying tile raster data

BlomURBEX Viewer is able to overlay tile raster data from BlomURBEX server, both in "Ortho" and "Oblique" modes. In next chapter is explained how is possible to overlap also local vector data loaded in Autodesk Map 2007/2008/2009. Both tile raster layers and local vector layers can be overlapped at the same time over the BlomURBEX Viewer. They all are treated as layers and drawn on top of the basemap imagery.

12.1 Activating and deactivating raster overlays

To activate or deactivate the raster overlays follow these steps:

1. Click in the Settings > Open Settings dialog menu.
2. Select the Overlays tab.
3. Each time the settings dialog in opened, a query is done to the BlomURBEX server to return the available tile layers for the current user. Remember when changing the UserToken option to close the dialog clicking OK button and to open again the dialog, because each UserToken has permission for different tile layers depending on user restrictions. Indeed, it is possible for a customer to host his vector data at BlomURBEX through a rasterization process.



4. Select one or several layers from the list "Tile layer to overlay from server". Click once to select and once again to deselect.
5. Click OK to save the setting and start overlaying or clean overlays. This setting is not saved in user registry for better performance initialization. BlomURBEX Viewer always starts with the setting unselected. It is needed to set it explicitly in each BlomURBEX Viewer session.

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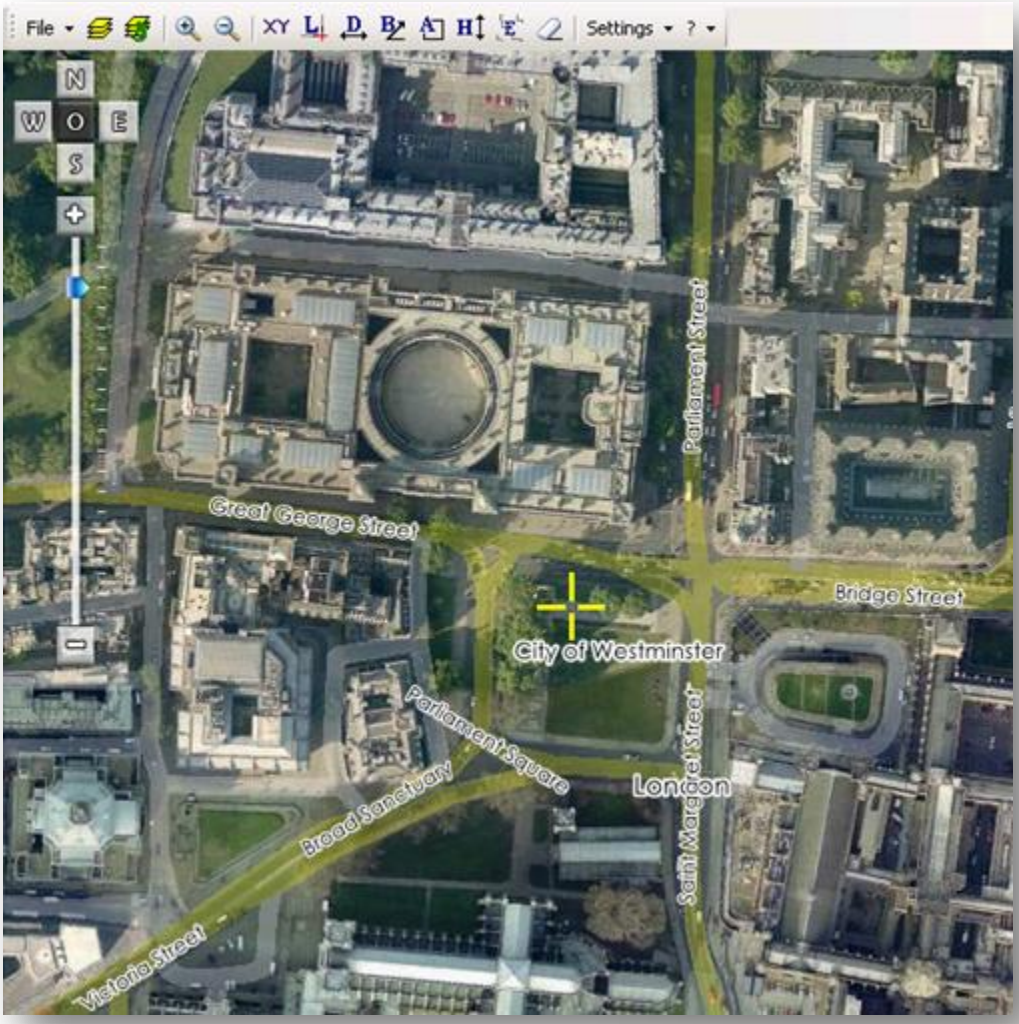

Tile raster overlay with TeleAtlas streetmap

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13 Overlaying vector data

BlomURBEX Viewer is able to overlay vector data from Autodesk Map 2007/2008/2009 on top of BlomURBEX imagery, both in "Ortho" and "Oblique" modes.

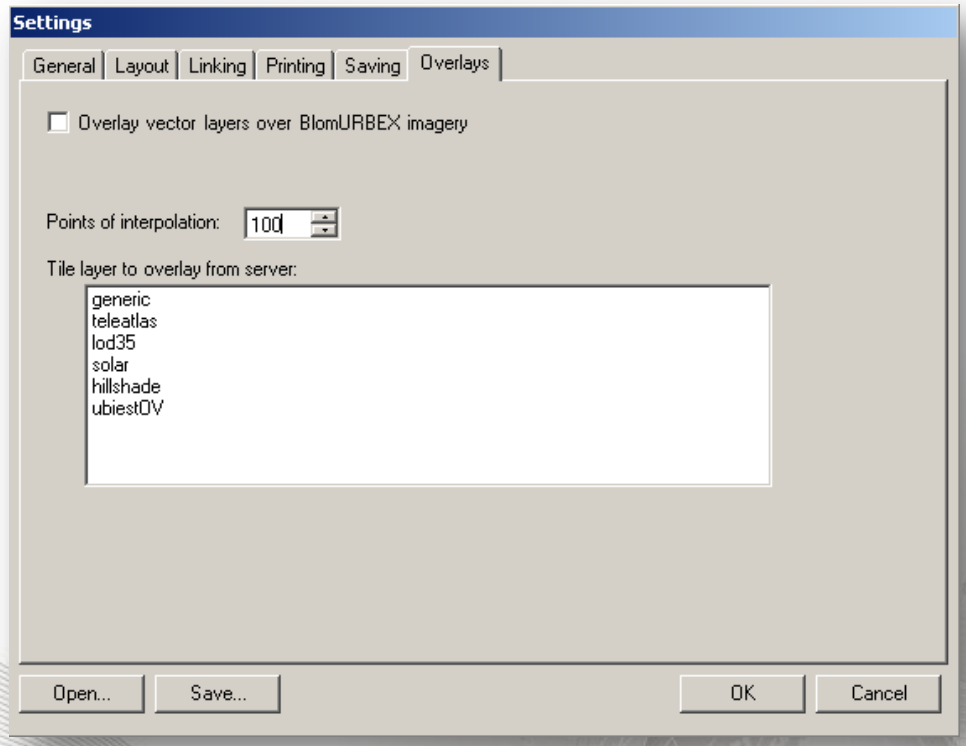
13.1 Activating and deactivating vector overlays

To activate or deactivate the vector overlays there are two options with the same result:

1. Click in "Overlay vector layers over BlomURBEX imagery" button in the BlomURBEX toolbar .

OR

2. Click in the Settings > Open Settings dialog menu.
3. Select the Overlays tab.



4. Check or uncheck the "Overlay vector layers over BlomURBEX imagery" checkbox to activate or deactivate overlays, respectively.
5. Click OK to save the setting and start overlaying or clean overlays. This setting is not saved in user registry for better performance initialization. BlomURBEX Viewer always start with the setting uncheck. It is needed to set it explicitly in each BlomURBEX Viewer session.

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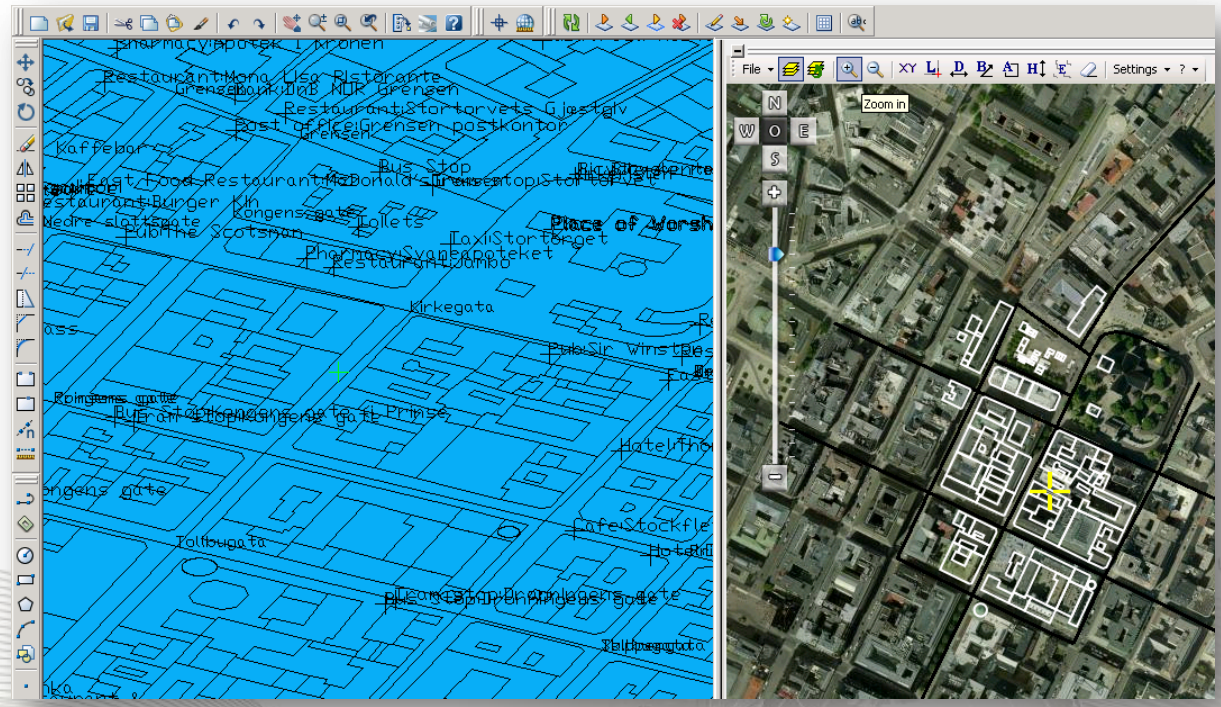
Overlying on top of oblique imagery may be a long time operation. Be patient when overlaying a big number of features over oblique images. Read below for tricks to improve performance.

13.2 Refreshing vector overlays

When Overlay option is activated the existing layers in the opened DWG in the Autodesk Map 2007/2008/2009 map display are added to BlomURBEX views. Layers added through a connection to SHP, Oracle or other data providers are not overlapped. They need to be inserted in a DWG file in order to be overlapped. If a new layer is added or any feature is modified in its geometry after activating the Overlay option, these changes are not shown immediately. To reflect these changes is needed to click in the "Reload overlays" button in the BlomURBEX Viewer toolbar . This function again adds the layers to BlomURBEX; cleans all the overlays and redraw again the vector data.



Before refreshing Vector layer

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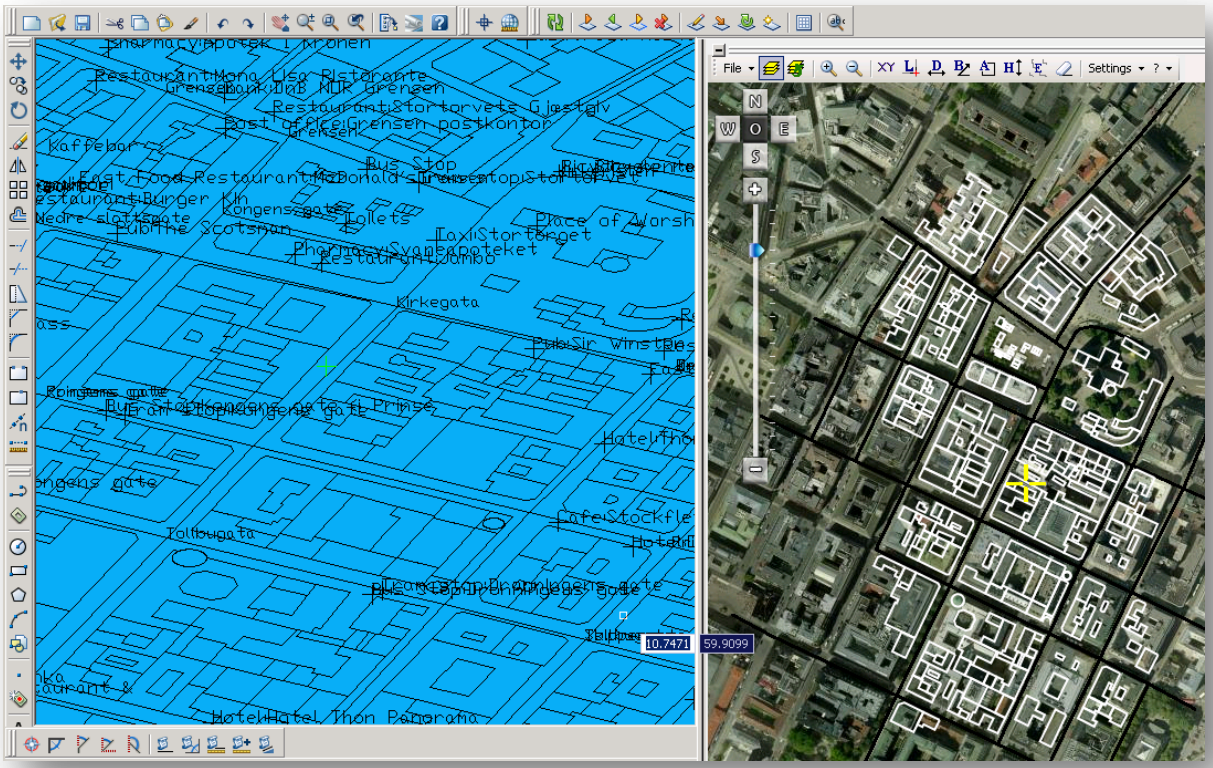

After refreshing Vector layer

When overlaying vector data in oblique imagery, remember that vertexes of the geometries should match with the imagery at the ground level, not at the roof level. That is the reason of the apparent offset seen when overlapping over oblique imagery.

13.3 Overlay and performance considerations

To overlap geometries faster, a combination of requests to BlomURBEX server and local interpolations is done. It is possible to adjust the precision of the interpolations.

For that, follow these steps.

1. Open Settings dialog.
2. Select the Overlays tab.
3. The amount of points used for the interpolation determines the accuracy.

It is possible to use no less than four points and no more than 400 points. Change this clicking up or down the "Points of interpolation" textbox. More points interpolates more accurately but is slower. Default is 100.

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When Overlay option is activated only visible features inside the visible extent are sent from Autodesk Map 2007/2008/2009 to BlomURBEX Viewer and rendered on top of BlomURBEX imagery. Try to limit the amount of features to be sent or the BlomURBEX Viewer performance will decrease when overlapping imagery. To limit the number of features follow this advices:

1. Remove those layers that do not contain entities, or that contain blocks or references. Blocks and references are ignored when overlapping. If the drawing contains a big number of temporary layers, blocks, and references, consider the creation of a new version of the drawing using only the entities that can be overlapped.
2. Use DWG format better than DXF format.
3. Use Color ByLayer and Line Type ByLayer. This has a great impact in performance. BlomURBEX viewer is optimized to show GIS-like vector data that uses one style per layer, instead of CAD-like vector layer, where each entity can be drawn with different style properties.
4. Hide in Autodesk Map 2007/2008/2009 those layers that are not relevant.
5. Zoom in inside "Ortho" BlomURBEX views so the visible extent contains a small number of features. Only features that fall inside the visible extent are overlaid. The zoom level is not a consideration in "Oblique" mode.

13.4 Symbology limitations

The BlomURBEX Viewer has less symbology properties than Autodesk Map 2007/2008/2009. These are the limitations of the current version:

1. Only Autodesk Map 2007/2008/2009 entities that support the LightWeightPolyline interface are sent to BlomURBEX. For example, ellipse or circle elements are not drawn in BlomURBEX. Arcs entities are treated as straight lines and the curved lines are not preserved. Each element in the drawing is draw with its own color and width, or the Layer one if the element has the ByLayer color and width.
2. Points are visible.
3. Polylines supported are always shown as solid lines, but the width and color are correctly chosen.
4. Polygons and the rest of Autodesk Map 2007/2008/2009 entity types are not supported.

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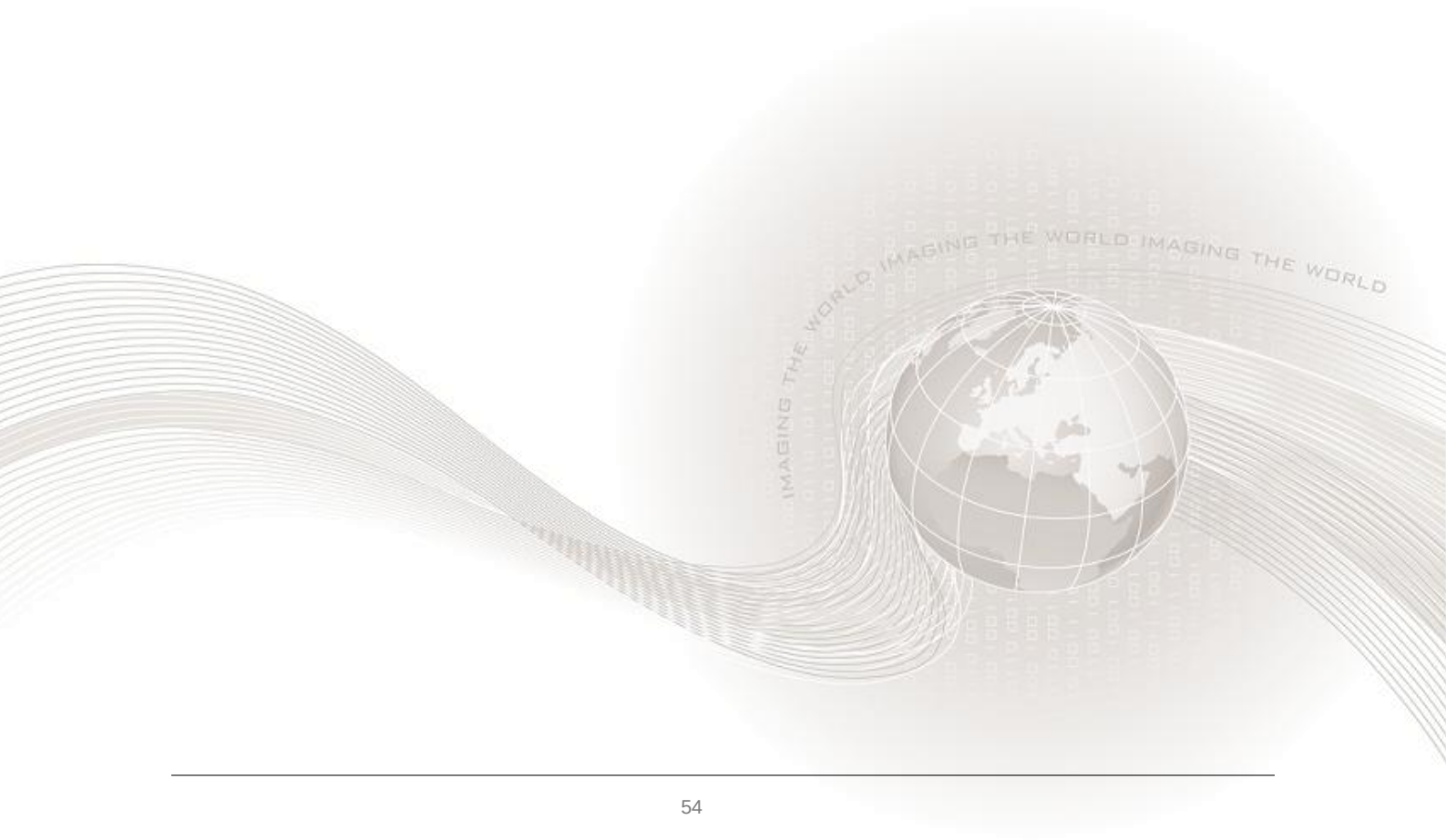
14 Uninstalling BlomURBEX plug-in for Autodesk Map 2007/2008/2009

To uninstall follow these steps:

1. In the Windows Control Panel, open the "Add/Remove programs", select BlomURBEX plug-in for Autodesk Map 2007/2008/2009 and uninstall, following the guidelines.



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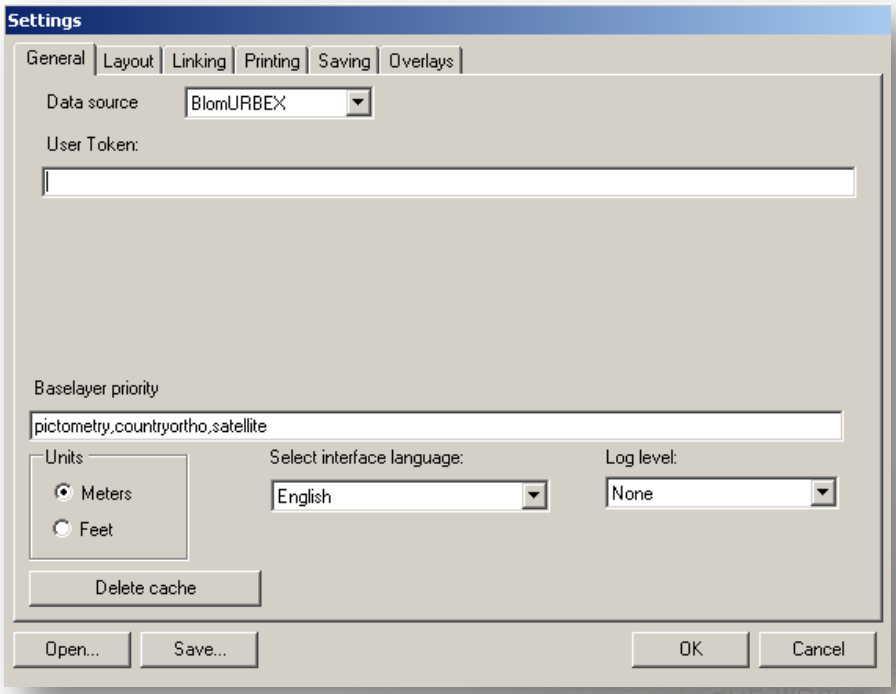
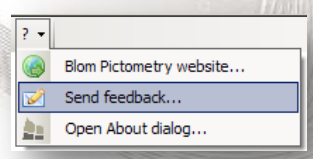
15 Troubleshooting

15.1 Log files

If the applications do not work as expected, the best way to know what is happening is to activate the logging utility.
In BlomURBEX Viewer, to activate logs, open the Settings dialog, and in the General tab, select the desired level for logs. A log file or several, one per process, will be created in the [User Application Data] \ BlomURBEX2D folder (usually c:\ Documents and Settings \<username>\Application Data\BlomURBEX2D). To deactivate logs just select None as log level. To activate logs select Error, Warning, or Information level (in order from minimum to maximum verbose).



Log files offer the time and some information about events that occur in the applications that can help to solve some problems. Otherwise, if the problem is not known, send the log files with your comments to Blom Technical Support to help in fixing the problem. You can use the menu? > Send feedback to send an email.



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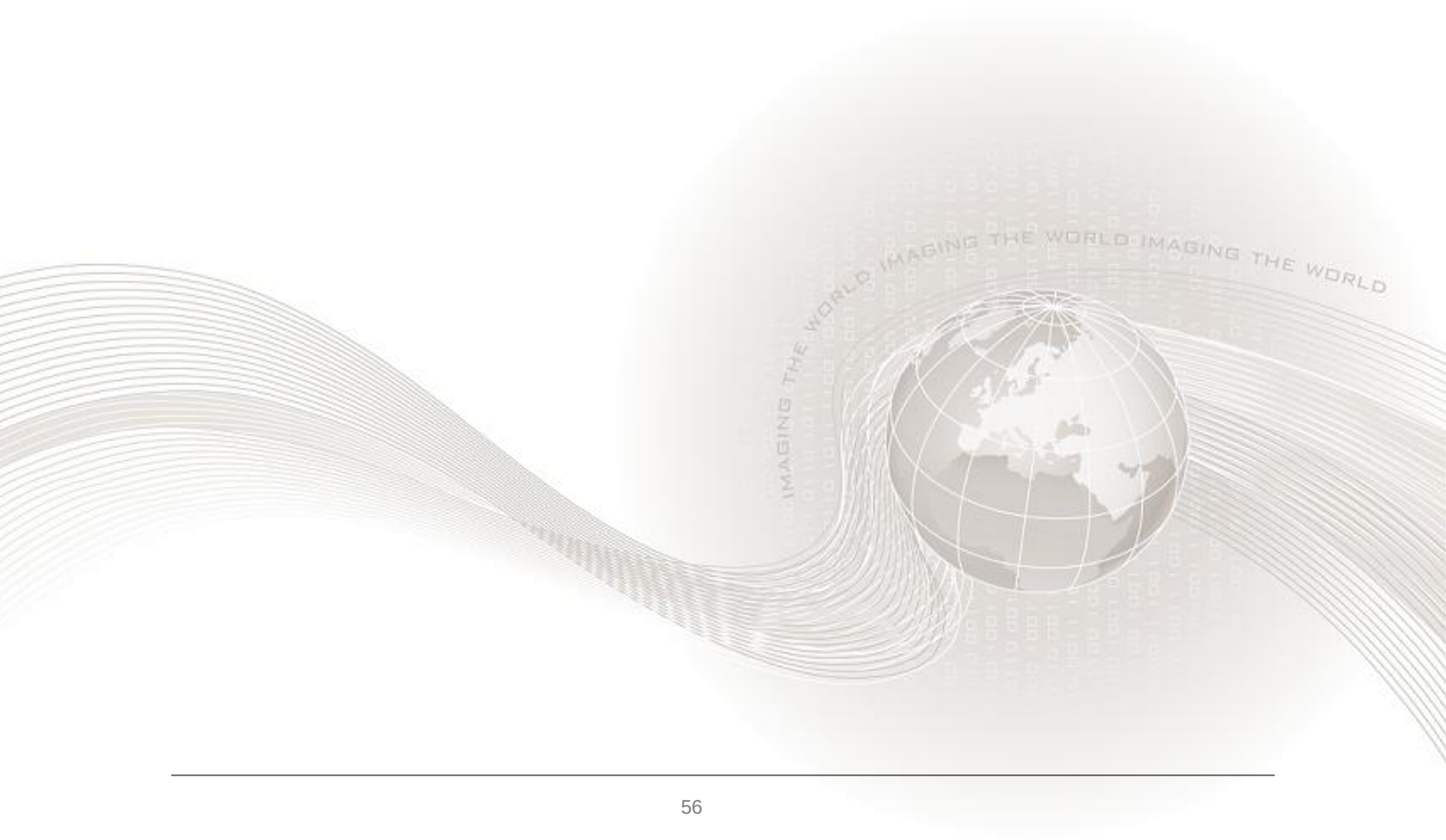
15.2 Cache directory

The BlomURBEX Viewer creates a cache folder stored in "[User Application Data] \ BlomURBEX2D \ cache" folder (usually c:\ Documents and Settings \<username>\Application Data\BlomURBEX2D\cache). This cache folder store tiles for faster retrieve of them.

To avoid this folder to resize to a big amount of bytes, it is possible to delete its contents periodically. Deleting the cache folder also ensures that the last tiles are downloaded.

To delete the cache click in the Delete cache button from the General tab of the Settings dialog, or just delete its content from Windows Explorer.



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16 Frequently Asked Questions

1. Why I do not see the visible and total extent of images in Autodesk Map 2007/2008/2009?

Ensure checkboxes in "Linking" tab of BlomURBEX Viewer Settings dialog are checked.

2. Why the point I select in Autodesk Map 2007/2008/2009 is not exactly the same in the image in BlomURBEX Viewer?

The data opened in Autodesk Map 2007/2008/2009 can be in any coordinate system. When digitizing this data, a coordinate system was used, defined by some parameters that describe the Earth and how to convert between projections. BlomURBEX Viewer uses the DotSpatial library to perform transformations between any projection and Mercator Spheric (EPSG: 3785), the default projection that use BlomURBEX Web Services at the moment. If the parameters used by the operator that digitizes the data opened in Autodesk Map 2007/2008/2009 and the parameters used in DotSpatial are not the exactly the same, some shift can occur in the location. In order to minimize this shift, it is possible to modify the epsg file that comes in the BlomURBEX install dir. The parameters must comply with the rules that expect DotSpatial (PROJ4 format). To know more about this check the appendix below.

3. Why the measurements are not saved in Autodesk Map?

The requirements to save measurements in Autodesk Map are the following. If any of this requirements are not fulfilled the saving will not takes place.

- In the BlomURBEX Viewer settings dialog a table and a field must be selected for the desired measurement type. To store heights, the correct dropdown box with the field for heights must be selected, for example. If the dropdown has <None> selected that measurement will be ignored.
- The "File > Start saving measurements" menu must be checked.

4. Why SHPs or other data do not appear when overlapping?

These data need to be transferred to the current opened DWG in order to be overlapped.

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17 Appendix A: how to add new projections

The projection support relies on the DotSpatial public domain library. In the installation folder of BlomURBEX Viewer a file "epsg" is provided that contains EPSG codes, names and parameters for the EPSG coded projections. If you need to modify an existing projection, or to add support for new projections, modify this file with any text editor following the DotSpatial (Proj4) rules for parameters. See the http://proj.maptools.org/ webpage for more information.

For example, if support for the Microsoft Live Maps projection is needed, add the next two lines to the file (the second line looks longer but is only one):

World Mercator

<54004> +proj=merc +lat_ts=0 +lon_0=0 +k=1.000000 +x_0=0 +y_0=0 +ellps=WGS84 +datum=WGS84 +units=m no_defs <>

Or support for Google Maps projection:

#Google

<900913> +proj=merc +a=6378137 +b=6378137 +lat_ts=0.0 +lon_0=0.0 +x_0=0.0 +y_0=0 +k=1.0 +units=m +nadgrids=@null +wktext +no_defs <>

For optimize the Select projection dialog, delete from the "epsg" file any projection not needed. Remember that each projection in the file uses two lines, so do not break the format of this file or BlomURBEX Viewer could not work correctly.

Once the "epsg" file is modified, open again the Settings dialog in BlomURBEX Viewer and reselect again the projection to refresh internal BlomURBEX settings.

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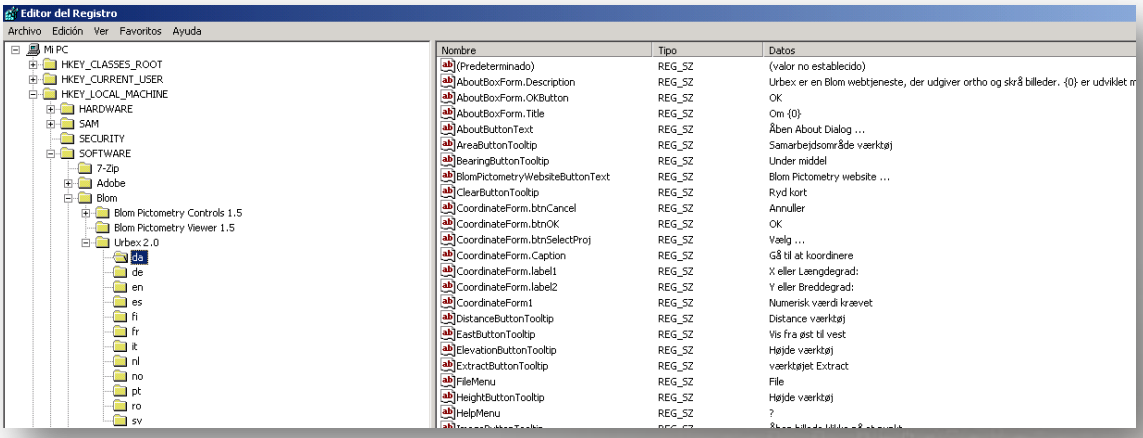
18 Appendix B: how to improve interface translation

BlomURBEX Viewer interface supports twelve languages. The strings for each language are stored in the registry, in the path HKEY_LOCAL_MACHINE / SOFTWARE / Blom / Urbex 2.0. Each language has a section: english (en), español (es), deutsch (de), français (fr), italiano (it), nederlands (nl), portugués (pt), dansk (da), norsk (no), svenska (sv), suomi (fi), româna (ro).

Each string uses a pair name-value. The name is an easy-to-understand name. For example, "AboutBoxForm.Description" is the description for BlomURBEX Viewer that appears in the "About" dialog. Change these values at your convenience using the registry editor. Next time you open BlomURBEX Viewer will reflect your changes. If any value is missing, the default value used is the English string.

If you found wrong strings in your language and want to help us improve the software, feel free to send us an export of the registry language settings to the Blom Technical Support email using? > Send feedback menu in BlomURBEX Viewer.



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